					DEPARTMENT						AMENI	FC DED REPOR	RM 3	
		AF	PLICATION FO	OR PERM	IIT TO DRILL					1. WELL NAME and N	UMBER NBU 921	-20G1BS		
2. TYPE O	F WORK	DRILL NEW WELL	REENTER	P&A WELL	DEEPEN	WELL ()			3. FIELD OR WILDCA	T NATURAL	. BUTTES		
4. TYPE O	F WELL				thane Well: NO					5. UNIT or COMMUNI	TIZATION NATURAL		ENT NAM	1E
6. NAME (OF OPERATOR		KERR-MCGEE OIL							7. OPERATOR PHONE				
8. ADDRE	SS OF OPERAT									9. OPERATOR E-MAI	L			
	AL LEASE NUM		P.O. Box 173779		INERAL OWNERS	SHIP				12. SURFACE OWNER		anadarko	.com	
(FEDERAI	L, INDIAN, OR S	TATE) UTU0575		FEC	DERAL (IN)	DIAN 🔵	STATE () F	EE 💭	FEDERAL N	DIAN 🔳	STATE	F	EE 🔵
13. NAME	OF SURFACE	OWNER (if box 12	= 'fee')							14. SURFACE OWNE	R PHONE	(if box 12	= 'fee')	
15. ADDR	ESS OF SURFA	CE OWNER (if box	12 = 'fee')							16. SURFACE OWNE	R E-MAIL	(if box 12	! = 'fee')	
	N ALLOTTEE O	R TRIBE NAME			ITEND TO COMM		RODUCTION	FROM	м	19. SLANT				
(II box 12	? = 'INDIAN')	Ute Tribe		YES	S (Submit C	Commingli	ing Applicatio	n) N	по 🔵	VERTICAL DI	RECTION	AL 📵 H	HORIZON	TAL 🔵
20. LOC/	ATION OF WELL	-		FOOTAG	ES	QTR	R-QTR	5	SECTION	TOWNSHIP	R/	ANGE	МЕ	RIDIAN
LOCATIO	ON AT SURFACE	<u> </u>	1706	FNL 260	06 FWL	SE	ENW		20	9.0 S	2	1.0 E		S
Top of U	ppermost Prod	lucing Zone	157	0 FNL 180	07 FEL	SV	WNE		20	9.0 S	2	1.0 E		S
At Total	Depth		157) FNL 180	07 FEL	SV	WNE		20	9.0 S	2	1.0 E		S
21. COUN	ITY	UINTAH		22. DI	STANCE TO NEA	REST LEA 180		et)		23. NUMBER OF ACR	ES IN DR 16		IT	
					STANCE TO NEA lied For Drilling		leted)	POOL	-	26. PROPOSED DEPT		TVD: 112	:92	
27. ELEV	ATION - GROUN	ID LEVEL		28. Bo	OND NUMBER	911	1			29. SOURCE OF DRIL				
		4804				WYB00	00291			WATER RIGHTS APPR	43-8		PPLICAB	LE
01.1.1		0		144 - 1 - 1 - 4	Hole, Casing					2		0		144.1.1.4
String Surf	Hole Size	Casing Size 8.625	0 - 2850	Weight 28.0	Grade & T		Max Mu		•	Cement Type V		Sacks 180	Yield 1.15	Weight 15.8
-		0.020	0 2000	20.0	0 00 21		0.2	_	_	Class G		270	1.15	15.8
Prod	7.875	4.5	0 - 11413	11.6	HCP-110	LT&C	12.	5	Prei	mium Lite High Stre	ngth	350	3.38	12.0
										50/50 Poz		1640	1.31	14.3
					А	TTACHN	MENTS							
	VEF	RIFY THE FOLLO	WING ARE AT	FACHED	IN ACCORDAN	ICE WITH	H THE UTA	н оп	L AND GAS	CONSERVATION G	ENERA	L RULES		
≥ w	ELL PLAT OR M	AP PREPARED BY	LICENSED SURVE	YOR OR E	ENGINEER		✓ COMF	LETE	DRILLING PI	_AN				
AF	FIDAVIT OF STA	ATUS OF SURFACE	OWNER AGREEM	MENT (IF FI	EE SURFACE)		FORM	5. IF (OPERATOR IS	S OTHER THAN THE L	EASE OW	NER		
I ✓ DII	RECTIONAL SU	RVEY PLAN (IF DIR	ECTIONALLY OF	HORIZON	TALLY DRILLED)	торос	GRAP	HICAL MAP					
NAME D	anielle Piernot			TITLER	Regulatory Analys	t			PHONE 720	929-6156				
SIGNATU	JRE			DATE 1	1/27/2012				EMAIL danie	lle.piernot@anadarko.	com			
	BER ASSIGNED 047533460			APPRO	VAL				Bol	Ryill				
									Perm	it Manager				

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-20G1BS

Surface: 1706 FNL / 2606 FWL SENW BHL: 1570 FNL / 1807 FEL SWNE

Section 20 T9S R21E

Unitah County, Utah Mineral Lease: UTU 0575

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2.a <u>Estimated Tops of Important Geologic Markers:</u> <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:</u>

<u>Formation</u>	<u>Depth</u>	Resource
Uinta	0 - Surface	
Green River	1,629'	
Birds Nest	1,908'	Water
Mahogany	2,400'	Water
Wasatch	4,975'	Gas
Mesaverde	7,960'	Gas
Sego	10,226'	Gas
Castlegate	10,317'	Gas
Blackhawk	10,692'	Gas
TVD =	11,292'	
TD =	11,413'	

2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. <u>Drilling Fluids Program</u>:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:

7.a Blackhawk (Part of Mesaverde Group)

Maximum anticipated bottom hole pressure calculated at 11292' TVD, approximately equals 7,227 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,727 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 10226' TVD, approximately equals 6,238 psi (0.61 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,015 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may

be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooic line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooic line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

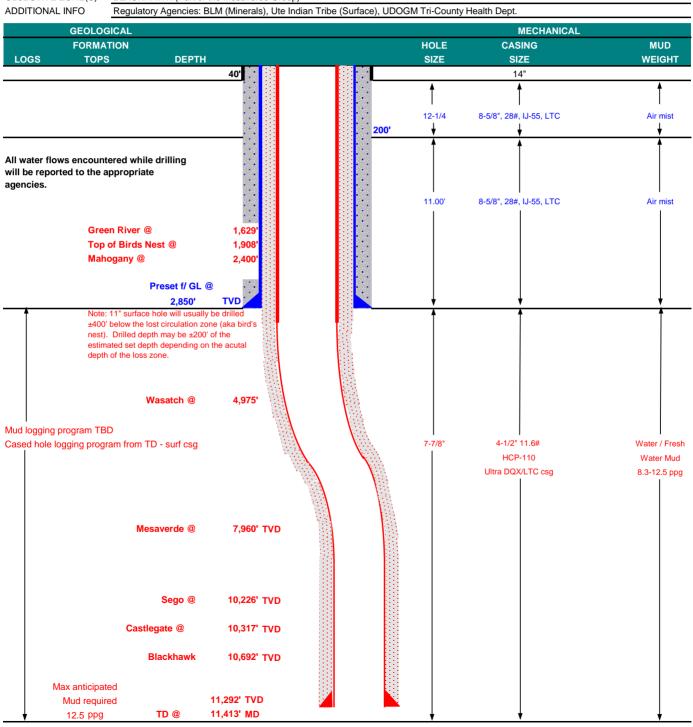
Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

RECEIVED: November 27, 2012



KERR-McGEE OIL & GAS ONSHORE LP Blackhawk Drilling Program

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE July 13, 2012 NBU 921-20G1BS WELL NAME TD TVD 11,413' MD 11,292 **FIELD** Natural Buttes COUNTY Uintah STATE Utah FINISHED ELEVATION 4,800' SURFACE LOCATION SENW 1706 FNL 2606 FWL Sec 20 T 9S R 21E 40.024155 -109.575716 NAD 83 Latitude: Longitude: BTM HOLE LOCATION SWNE 1570 FNL 1807 FEL R 21E Sec 20 T 9S Latitude: 40.024526 Longitude: -109.572616 NAD 83 BLACKHAWK (Part of the Mesaverde Group) OBJECTIVE ZONE(S) Regulatory Agencies: BLM (Minerals), Ute Indian Tribe (Surface), UDOGM Tri-County Health Dept. ADDITIONAL INFO





KERR-McGEE OIL & GAS ONSHORE LP Blackhawk Drilling Program

CASING PROGRAI	<u>M</u>	DESIGN FACTORS									
										LTC	DQX
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TEN	ISION
CONDUCTOR	14"	()-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,850	28.00	IJ-55	LTC	1.89	1.41	4.98	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.18		3.43
	4-1/2"	5,000	to	11,413'	11.60	HCP-110	LTC	1.19	1.18	4.64	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water	to surface, o	ption 2 will b	e utilized	
Option 2 LEAD	2,350'	65/35 Poz + 6% Gel + 10 pps gilsonite	220	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,473'	Premium Lite II +0.25 pps	350	35%	12.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	6,940'	50/50 Poz/G + 10% salt + 2% gel	1,640	35%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be	taken at 1,000'	minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

Kenny Gathings / Lovel Young

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Travis Hansell		
DRILLING SUPERINTENDENT:		DATF.	

RECEIVED: November 27, 2012

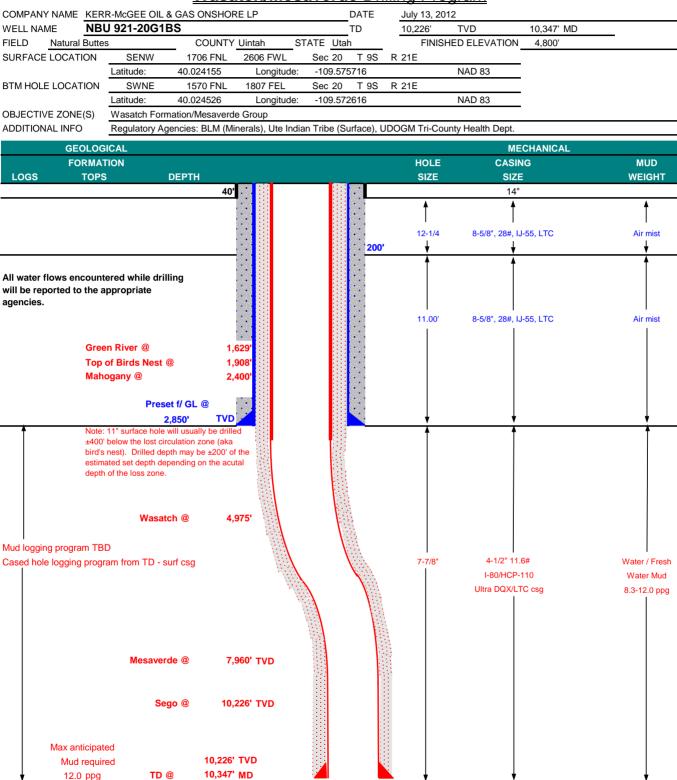
^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

TD@

12.0 ppg



KERR-McGEE OIL & GAS ONSHORE LP Wasatch/Mesaverde Drilling Program





KERR-McGEE OIL & GAS ONSHORE LP Wasatch/Mesaverde Drilling Program

CASING PROGRAI	<u>M</u>	DESIGN FACTORS									
										LTC	DQX
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								7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.00		2.72
								10,690	8,650	223,000	
	4-1/2"	5,000	to	10,347'	11.60	HCP-110	LTC	1.53	1.36	4.40	

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SURFACE		NOTE: If well will circulate water	to surface, o _l	otion 2 will b	e utilized		
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		+ 0.25 pps Flocele + 3% salt BWOW					
TAII	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CM	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,467'	Premium Lite II +0.25 pps	350	35%	12.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAII	5,880'	50/50 Poz/G + 10% salt + 2% gel	1,390	35%	14.30		1.31
		+ 0.1% R-3					

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

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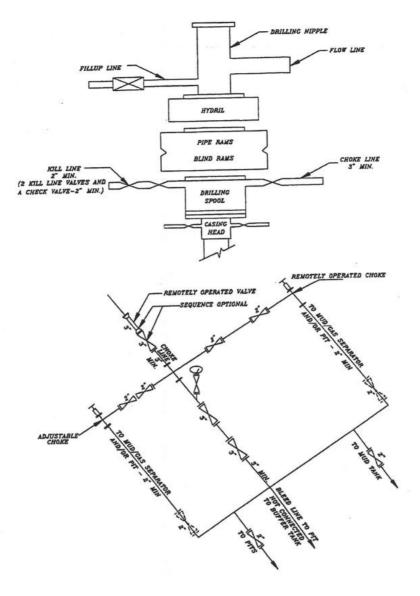
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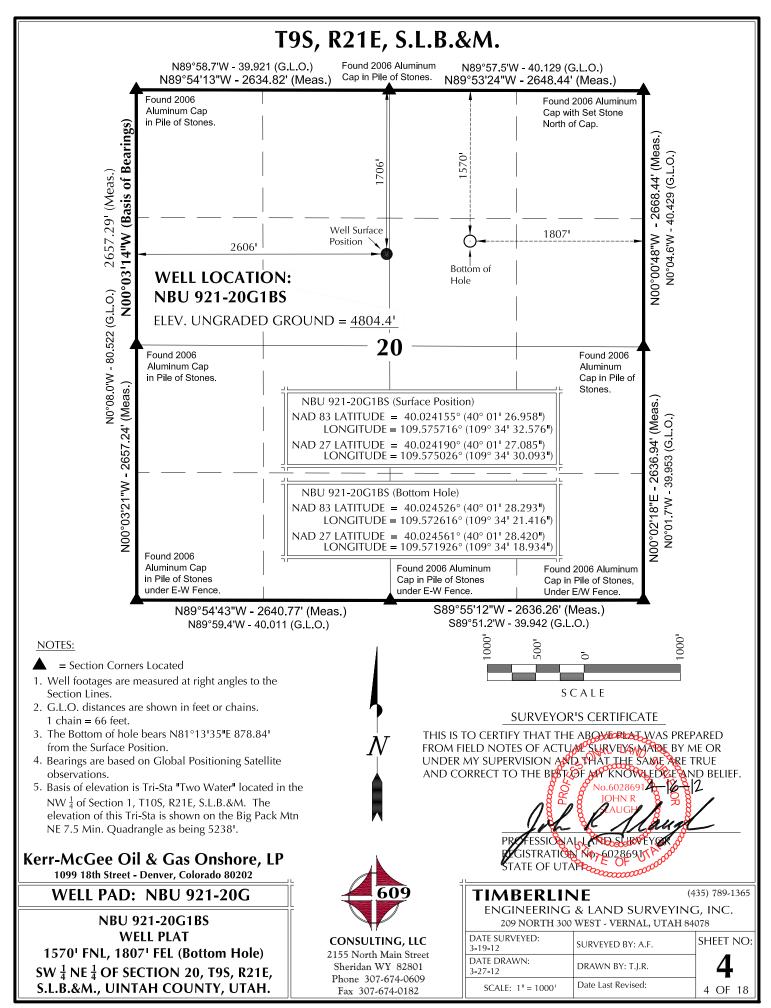
DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Travis Hansell		
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young		

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-20G1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

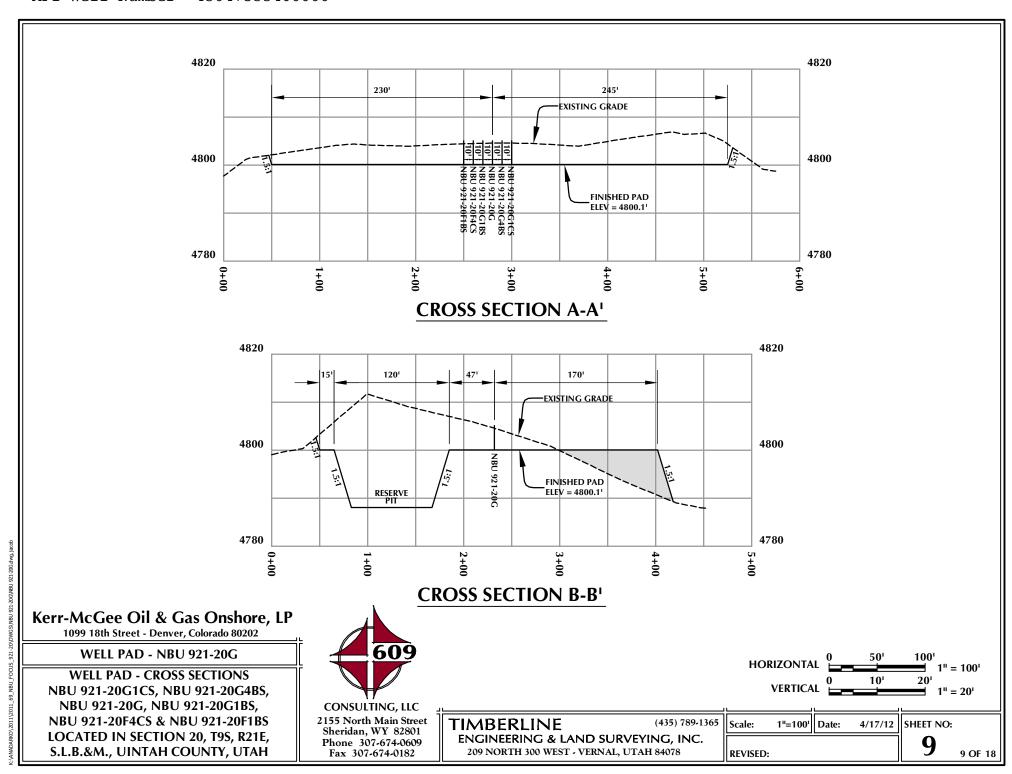


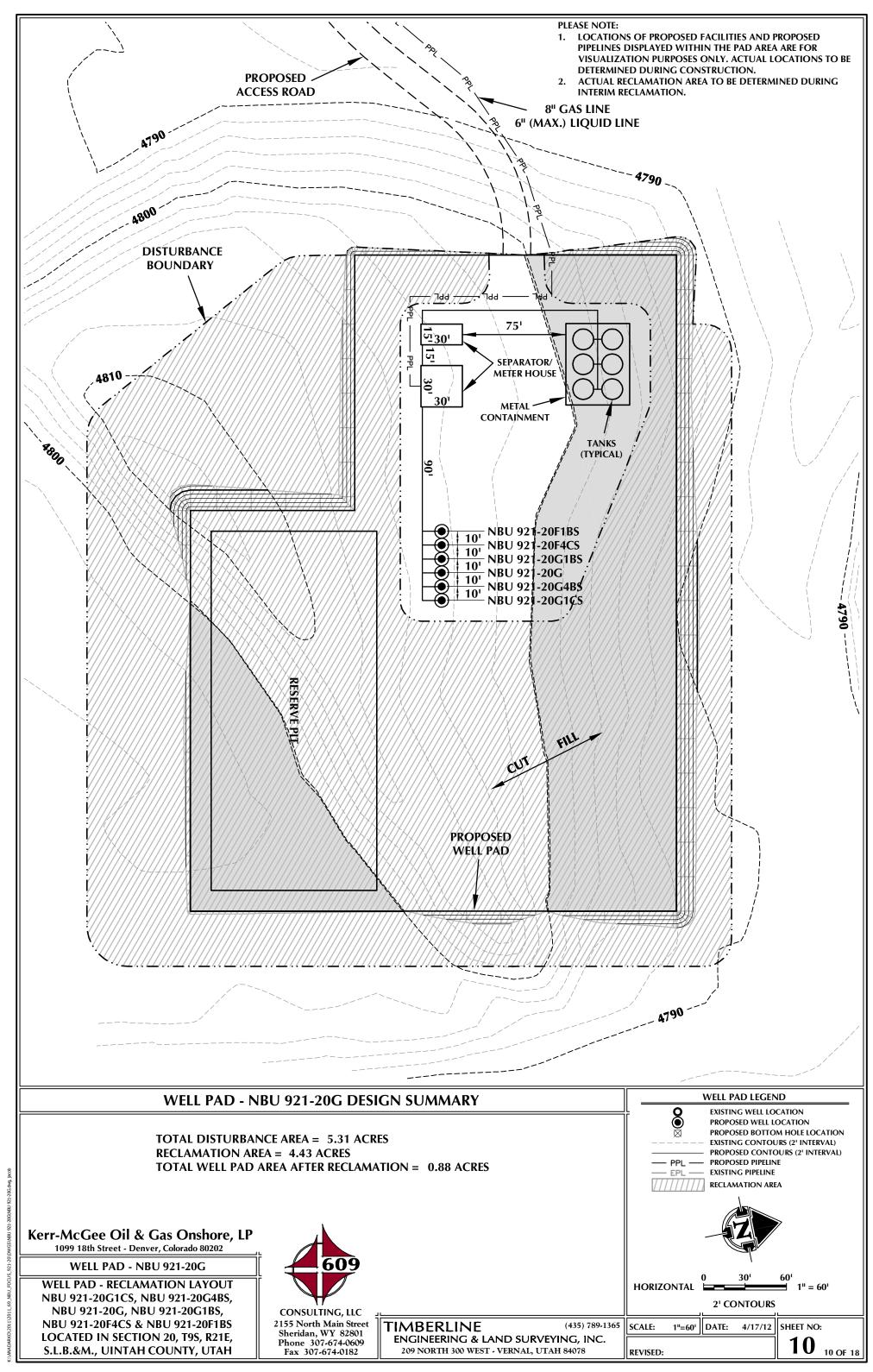
			SURFACE PO							OTTOM HOLE		
WELL NAME	N/ LATITUDE	LONGIT	UDE LATITU	NAD27	CITIIDE	EOOTACE:	LATIT	NAD8	3 LONGITUDE	NAI LATITUDE		FOOTACES
NBU	40°01'26.900			.027" 109°34		FOOTAGES 1712' FNL	40°01'2		09°34'21.410"		LONGITUDE 109°34'18.928"	
921-20G1CS	40.024139°	109.57561	11° 40.02417	'4° 109.57	4921° 2	2636¹ FWL	40.0236	617° 1	09.572614°	40.023653°	109.571924°	1807' FEL
NBU 921-20G4BS	40°01'26.919 40.024144°	109°34'32 109.57564		.047" 109°34 30° 109.57		1710' FNL 2626' FWL	40°01'2	1 .	09°34'21.391" 09.572609°	40°01'21.880" 40.022744°	109°34'18.909" 109.571919°	2232' FNL 1806' FEL
NBU	40°01'26.938	5" 109°34'32	.450" 40°01'27	.066" 109°34	'29.967"	1708' FNL	40°01'2	7.172" 1	09°34'30.706"	40°01'27.299"	109°34'28.223"	1684' FNL
921-20G NBU	40.024150° 40°01'26.958	109.57568 109°34'32		.085" 109.57 .085" 109°34		2616' FWL 1706' FNL	40.0242 40°01'2		09.575196° 09°34'21.416"	40.024250° 40°01'28.420"	109.574506° 109°34'18.934"	2530' FEL 1570' FNL
921-20G1BS	40.024155°	109.57571	16° 40.02419	0° 109.57	5026° 2	2606' FWL	40.0245	526° 1	09.572616°	40.024561°	109.571926°	1807' FEL
NBU 921-20F4CS	40°01'26.977 40.024160°	109°34'32 109.57575		105 5 1		1704' FNL 2597' FWL	40°01'2 40.0222	1.	09°34'38.628" 09.577397°	40°01'20.238" 40.022288°	109°34'36.145" 109.576707°	2399' FNL 2134' FWL
NBU 921-20F1BS	40°01'26.996 40.024166°			.124" 109°34)1° 109.57		1702' FNL 2587' FWL	40°01'2 40.0240	1 -	09°34'38.750"	40°01'26.828" 40.024119°	109°34'36.267"	1732' FNL
921-201103	40.024100	109.57578		TIVE COORD					09.577430° n Hole	40.024119	109.576741°	2126' FWL
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST		NAME	NORTH		WELL NAM	IE NORTH	EAST
NBU	-191.0'	839.21	NBU 021 20C4PS	-524.01	850.11	NBU)C	23.4	135.8¹	NBU 021 20C1B	134.0	868.61
921-20G1CS WELL NAME	NORTH	EAST	921-20G4BS WELL NAME	NORTH	EAST	921-2	<i>7</i> 0			921-20G1B	ا د	
NBU	-694.4	-462.0'	NBU	-29.4	-460.8	-			BASIS	S OF BEARING	GS IS THE WES	Γ LINE
921-20F4CS		•	921-20F1BS		<u> </u>						SECTION 20, T	
/											is taken fro Ning satellit	
-09	30'	0		.09							O BEAR NO0°0	
/ '		SCALE							1			
/		JUNEL										
//												
									7			
									 7			
									<i>I</i> V			
					٠, د							
y					7-20F1BS 7-20F4CS	NBU 921-20G1BS NNBU 921-20G NBU 921-20G4BS	S					
					:0F 0F4	808	31		M	, T	Rottom Hole)
N78°45	12611				1.2	7,702	707			(10 E	$=81.22639^{\circ}$	3 84'
$\frac{N78^{\circ}45}{AZ = 281}.$	242===				92,55	27.72	571-70G1CS			N81°1	3ottom Hole =81.22639° 3'35"E - 878	2.0.
	-4278° <u> </u>				NBU VBU IBU	2	,			==		
	4 - 26	6 35194	。		ZZZ	NB JB	_=:	====	======================================	⁷ 9'		
	S86°21'0	7"W - 40	L·/2 — — -		790	₹ Z	- N8	0°12'3 8=24	===== 7"E - 137.7 30.21028°	Bottom o	f	
-	(To Bot	tom Hole	=)	ŀ	10' 10'			~ ~ ~		Hole		
				/	10' 10' 10'	10' 10'	\			SZZ	?=102.82278 0'38"F	
				/			`	` \		1	0'38''E - 266	3°
				ÍR		_		\	Se.A.	(10 E	=102.82278 0'38"E - 860 Sottom Hole)	71'
				- / `	\			_	()\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		(10le)	
			(1) (30 (1) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	/					- 1080	121 56/1:651110 Dm Hole) 62		
			25 25 VE		/	_			Site	Dn 29970		1
			2,7,70	1 /	/			_		~\@\ <u>`</u> .65	,	<u> </u>
		9		[1							
		₹3′		'								/ / /
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		جي)									/	/ \
		/		1 1	_						/	
		,	-	. , _								/
Kerr-Mc	Gee Oil	& Gas (Onshore, I	LP		. \			_		/	/ /
	8th Street - D			L							1 1	
WEL	L PAD -	NBU 92	21-20G		\mathcal{L}	609		TIN	MBERL	INE	(4:	35) 789-1365
				 - -				11	NGINEERIN	G & LAND	SURVEYING	· .
	PAD INT			,	A			D == =		BOO WEST - VEF	RNAL, UTAH 840	078
VVELLS - N			J 921-20G4B S	" ∥	CONSU		_	III DATE S	SURVEYED:	SURVEYED E		I
NRI) 9/1=/!!! · '	NBU 1921-7	20G1RS	II				3-19-12	2	JORVETEDE	BY: A.F.	SHEET NO:
	921-20G, 1 921-20F4CS		20G1BS, 21-20F1BS		2155 Nort	th Main Str	eet	3-19-12 DATE D	DRAWN:			SHEET NO:
NBU 9 Loca		& NBU 92 TION 20, 1	21-20F1BS F9S, R21E,		2155 Nort Sheridan Phone 3		eet 1 19	3-19-12 DATE D 3-27-12	DRAWN:	DRAWN BY:	T.J.R.	SHEET NO: 7 7 OF 18

S.L.B.&M., UINTAH COUNTY, UTAH

209 NORTH 300 WEST - VERNAL, UTAH 84078

REVISED:





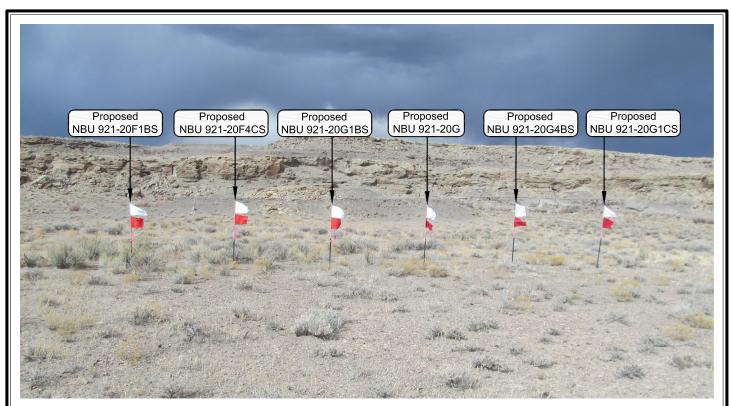


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20G

LOCATION PHOTOS NBU 921-20G1CS, NBU 921-20G4BS, NBU 921-20G, NBU 921-20G1BS, NBU 921-20F4CS & NBU 921-20F1BS LOCATED IN SECTION 20, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

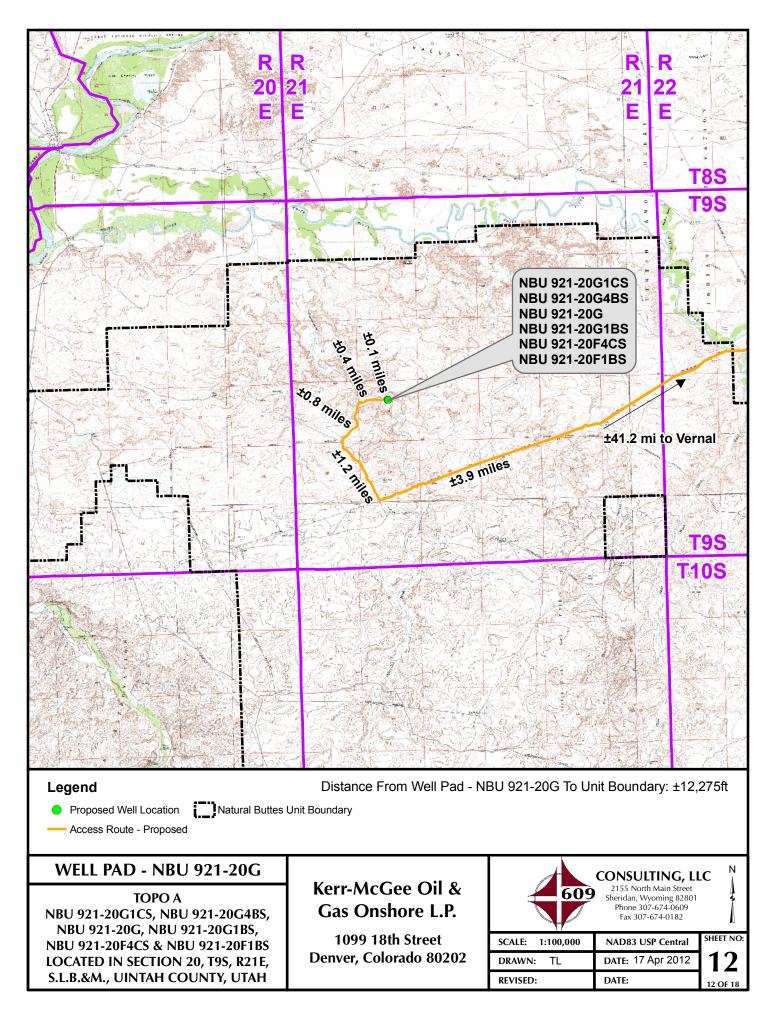
TIMBERLINE

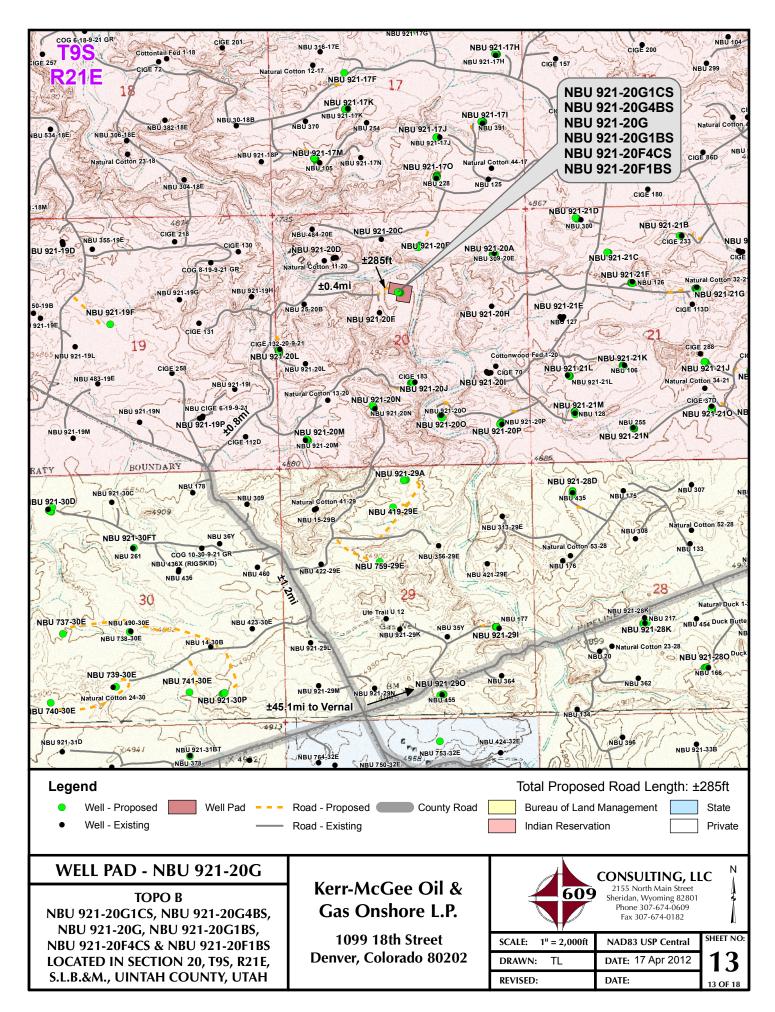
(435) 789-1365

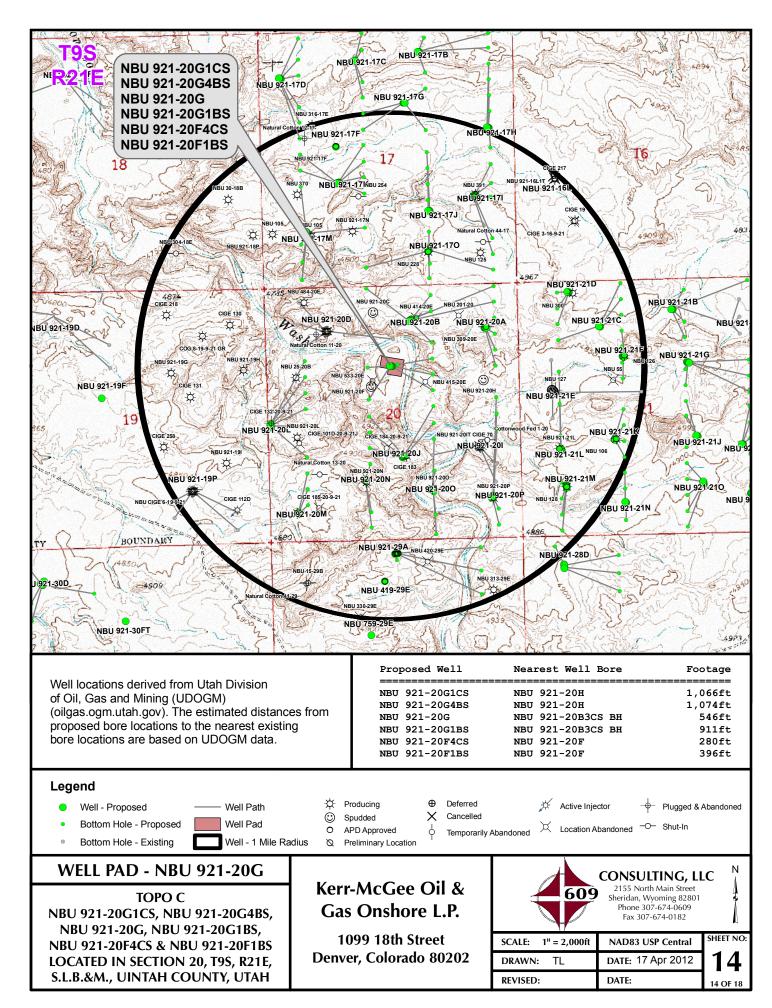
11 OF 18

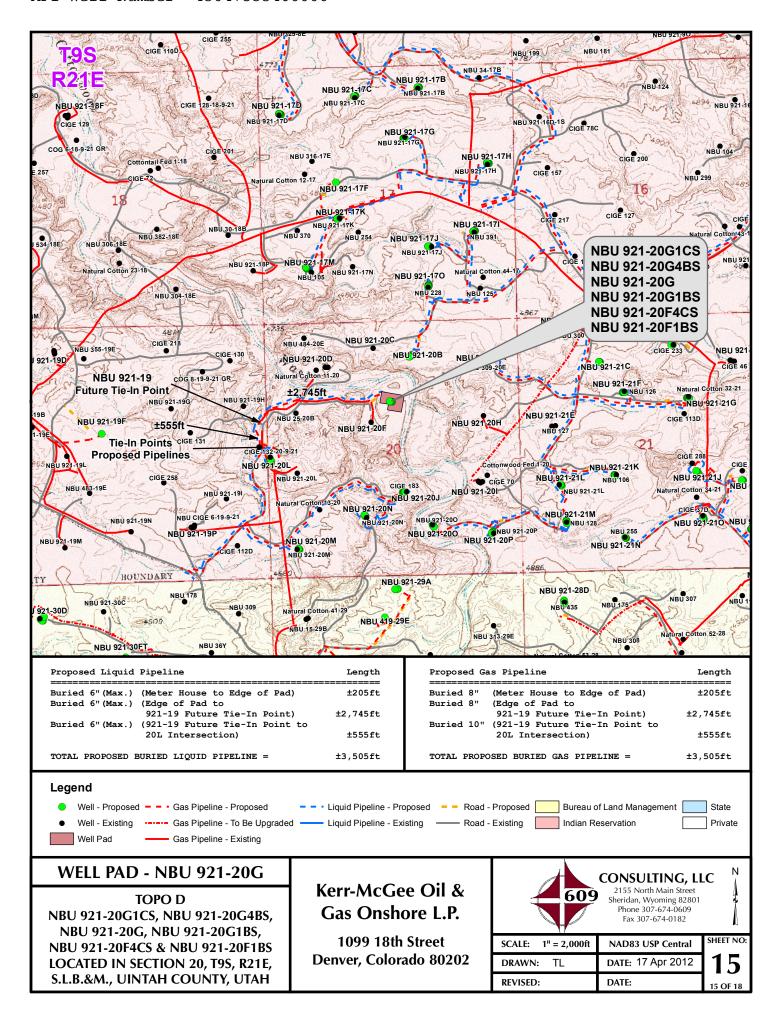
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

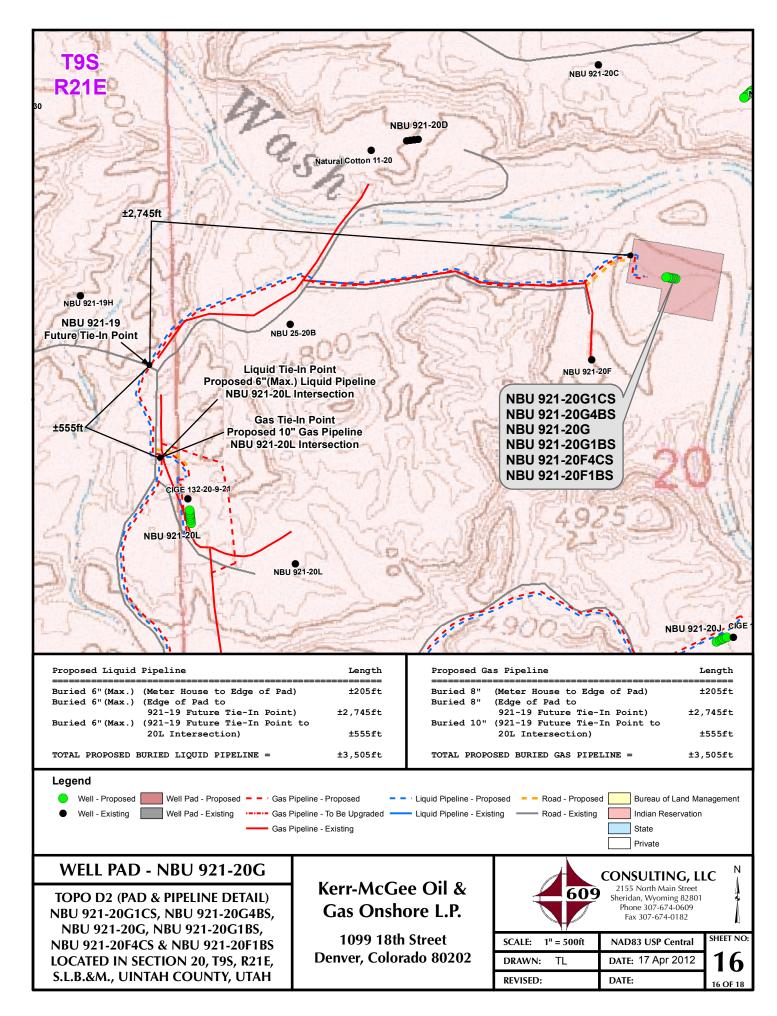
DATE PHOTOS TAKEN: 3-19-12	PHOTOS TAKEN BY: A.F.	SHEET NO:
DATE DRAWN: 3-27-12	DRAWN BY: T.J.R.	11
Date Last Revised:		11 OF 18

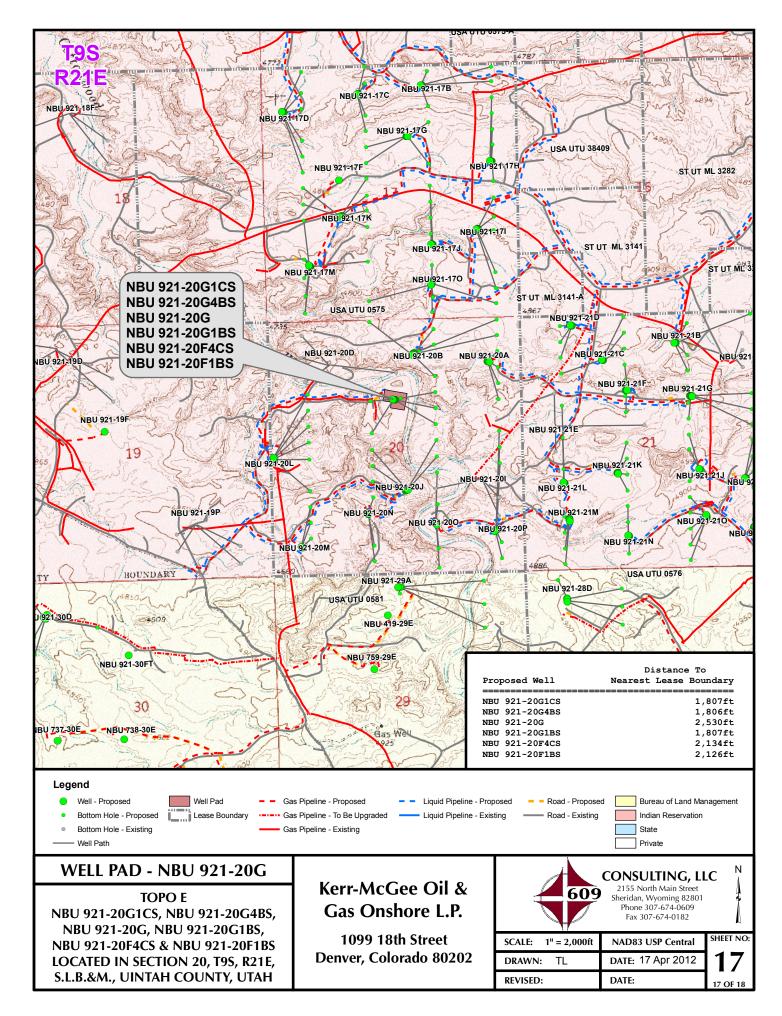












Kerr-McGee Oil & Gas Onshore, LP WELL PAD - NBU 921-20G WELL – NBU 921-20G1CS, NBU 921-20G4BS, NBU 921-20G, NBU 921-20G1BS, NBU 921-20F4CS & NBU 921-20F1BS Section 20, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 3.9 miles to a second Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the second Class D County Road approximately 1.2 miles to a Tribal Road to the northeast. Exit right and proceed in a northeasterly, then northerly direction along the Tribal Road approximately 0.8 miles to a second Tribal Road to the northeast. Exit right and proceed in a northeasterly, then easterly direction along the second Tribal Road approximately 0.4 miles to the proposed access road to the northeast. Follow road flags in a northeasterly direction approximately 285 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.6 miles in a southerly direction.

SHEET 18 OF 18

API Well Number: 43047 5 30 3ct 6 0 00 TAB - UTM (feet), NAD27, Zone 12N

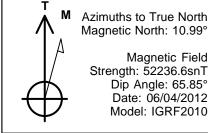
Scientific Drilling

Site: NBU 921-20G PAD Well: NBU 921-20G1BS

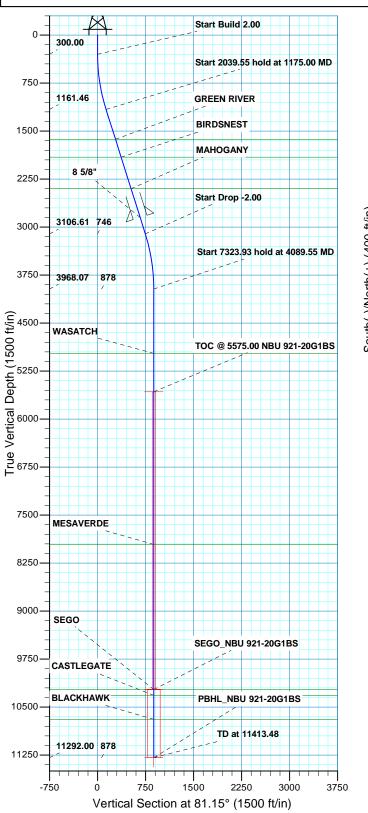
Wellbore: OH

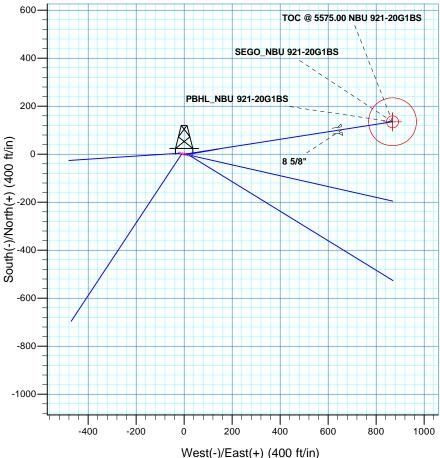
Design: PLAN #1 PERMIT





						U 921-20G1BS				
				GL 4800	& KB 4 @ 480	4.00ft (ASSUMED)				
+N/-S +E/-W Northing Easting Latittude Longitude 0.00 0.00 14538043.59 2039358.82 40.024190 -109.575026										
				D	ESIGN TARGE	T DETAILS				
Name	TVD	+N/-S	+E/-W	Norti	ning	Easting	Latitude	Longitude	Shape	
TOC	5575.00	135.13	868.03	1453819	2.59	2040224.57	40.024561	-109.571926	Point	
	- plan hits targe	t center								
SEGO	10226.00	135.13	868.03	1453819	2.59	2040224.57	40.024561	-109.571926	Circle (Radius: 25.00	
	- plan hits targe	t center								
PBHL	11292.00	135.13	868.03	1453819	2.59	2040224.57	40.024561	-109.571926	Circle (Radius: 100.0	
	- plan hits targe	t center								





-400		-200		U	20	00	40	0	600	800	1000	
	West(-)/East(+) (400 ft/in)											
									-			
				SECTIO	ON	DETAILS	6					
MD	Inc	Azi	TVD	+N/-S	+E	=/-W	Dleg	TFace	VSect			
0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00			
300.00	0.00	0.00	300.00	0.00	(0.00	0.00	0.00	0.00			
1175.00	17.50	81.15	1161.46	20.40	131	1.01	2.00	81.15	132.59			
3214.55	17.50	81.15	3106.61	114.74	73	7.02	0.00	0.00	745.89			
4089.55	0.00	0.00	3968.07	135.13	86	8.03	2.00	180.00	878.49			
11413.48	0.00	0.00	11292.00	135.13	86	8.03	0.00	0.00	878.49	PBHL_NBU 921-	20G1BS	
	FORMATION TOP DETAILS											
PROJECT DETAILS:	UTAH - U	JTM (fe	et), NAD27	, Zone 12N		TVDP	ath	MD	Path	Formation	1	
					┪	1629	.00	166	55.23	GREEN RIVER	₹	
Geodetic System: University				S Survey Fe	et	1908	.00	195	57.77	BIRDSNES	Г	
Datum: NAD 192		CON CC	ONUS)			2400	.00	24	73.65	MAHOGAN'	1	
Ellipsoid: Clarke 1						4975	.00	509	96.48	WASATCH	1	
Zone: Zone 12						7960	.00	808	31.48	MESAVERDI	Ē	
Location: SECTIO		0S R21	E			10226	.00	1034	17.48	SEGO)	
System Datum: Mean Se	ea Level					10317	.00	1043	38.48	CASTLEGATI		
						10692	.00	1081	13.48	BLACKHAW	(
				CASIN	IG I	DETAILS						
			TVD	М	1D		Name	Size				
[2850.00	2945.4	48		8 5/8					

Plan: PLAN #1 PERMIT (NBU 921-20G1BS/OH)

Created By: Gabe Kendall Date: 9:47, June 05 2012

RECEIVED:

API Well Number: 43047533460000



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-20G PAD NBU 921-20G1BS

OH

Plan: PLAN #1 PERMIT

Standard Planning Report

05 June, 2012



API Well Number: 43047533460000



SDIPlanning Report



Database: EDM 5000.1 Single User Db

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Site

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

 Geo Datum:
 NAD 1927 (NADCON CONUS)

 Map Zone:
 Zone 12N (114 W to 108 W)

System Datum: Mean Sea Level

NBU 921-20G PAD, SECTION 20 T10S R21E

Northing: 14,538,038.24 usft Site Position: Latitude: 40.024174 From: Lat/Long Easting: 2,039,388.30 usft Longitude: -109.574921 **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.92 13.200 in

Well NBU 921-20G1BS, 1706 FNL 2606 FWL

 Well Position
 +N/-S
 5.83 ft
 Northing:
 14,538,043.60 usft
 Latitude:
 40.024190

 +E/-W
 -29.40 ft
 Easting:
 2,039,358.81 usft
 Longitude:
 -109.575026

Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 4,800.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 06/04/12 10.99 65.85 52.237

PLAN #1 PERMIT Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 81.15

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,175.00	17.50	81.15	1,161.46	20.40	131.01	2.00	2.00	0.00	81.15	
3,214.55	17.50	81.15	3,106.61	114.74	737.02	0.00	0.00	0.00	0.00	
4,089.55	0.00	0.00	3,968.07	135.13	868.03	2.00	-2.00	0.00	180.00	
11,413.48	0.00	0.00	11,292.00	135.13	868.03	0.00	0.00	0.00	0.00 PE	BHL_NBU 921-20G





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Design:	PLAN #1 PER	MH							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00 100.00 200.00 300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 100.00 200.00 300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Start Build 2.0 400.00 500.00	2.00 4.00	81.15 81.15	399.98 499.84	0.27 1.07	1.72 6.90	1.75 6.98	2.00 2.00	2.00 2.00	0.00 0.00
600.00 700.00 800.00 900.00	6.00 8.00 10.00 12.00	81.15 81.15 81.15 81.15	599.45 698.70 797.47 895.62	2.41 4.29 6.69 9.63	15.51 27.55 43.00 61.86	15.69 27.88 43.52 62.60	2.00 2.00 2.00 2.00	2.00 2.00 2.00 2.00	0.00 0.00 0.00 0.00
1,000.00 1,100.00 1,175.00	14.00 16.00 17.50 hold at 1175.00	81.15 81.15 81.15	993.06 1,089.64 1,161.46	13.09 17.07 20.40	84.08 109.66 131.01	85.10 110.98 132.59	2.00 2.00 2.00	2.00 2.00 2.00	0.00 0.00 0.00
1,200.00 1,300.00 1,400.00	17.50 17.50 17.50	81.15 81.15 81.15	1,185.30 1,280.67 1,376.05	21.55 26.18 30.80	138.44 168.15 197.87	140.11 170.18 200.25	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
1,500.00 1,600.00 1,665.23	17.50 17.50 17.50	81.15 81.15 81.15	1,471.42 1,566.79 1,629.00	35.43 40.05 43.07	227.58 257.29 276.67	230.32 260.39 280.01	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00 0.00
1,700.00	R 17.50	81.15	1,662.16	44.68	287.00	290.46	0.00	0.00	0.00
1,800.00 1,900.00 1,957.77	17.50 17.50 17.50	81.15 81.15 81.15	1,757.53 1,852.90 1,908.00	49.31 53.93 56.60	316.72 346.43 363.60	320.53 350.60 367.97	0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
2,000.00 2,100.00	17.50 17.50	81.15 81.15	1,948.28 2,043.65	58.56 63.18	376.14 405.86	380.67 410.74	0.00 0.00	0.00 0.00	0.00 0.00
2,200.00 2,300.00 2,400.00 2,473.65	17.50 17.50 17.50 17.50	81.15 81.15 81.15 81.15	2,139.02 2,234.39 2,329.76 2,400.00	67.81 72.43 77.06 80.47	435.57 465.28 494.99 516.88	440.81 470.89 500.96 523.10	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
MAHOGANY 2,500.00	17.50	81.15	2,425.13	81.69	524.71	531.03	0.00	0.00	0.00
2,600.00 2,700.00 2,800.00 2,900.00 2,945.48	17.50 17.50 17.50 17.50 17.50	81.15 81.15 81.15 81.15 81.15	2,520.51 2,615.88 2,711.25 2,806.62 2,850.00	86.31 90.94 95.56 100.19 102.29	554.42 584.13 613.84 643.56 657.07	561.10 591.17 621.24 651.31 664.99	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8 5/8"									
3,000.00 3,100.00 3,200.00 3,214.55 Start Drop -2.	17.50 17.50 17.50 17.50	81.15 81.15 81.15 81.15	2,901.99 2,997.36 3,092.74 3,106.61	104.81 109.44 114.06 114.74	673.27 702.98 732.69 737.02	681.38 711.45 741.52 745.89	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
3,300.00	15.79	81.15	3,188.48	118.50	761.20	770.37	2.00	-2.00	0.00
3,400.00 3,500.00 3,600.00 3,700.00 3,800.00	13.79 11.79 9.79 7.79 5.79	81.15 81.15 81.15 81.15 81.15	3,285.16 3,382.67 3,480.90 3,579.72 3,679.01	122.43 125.84 128.72 131.07 132.88	786.43 808.30 826.80 841.90 853.58	795.90 818.04 836.76 852.04 863.87	2.00 2.00 2.00 2.00 2.00	-2.00 -2.00 -2.00 -2.00 -2.00	0.00 0.00 0.00 0.00 0.00
3,900.00	3.79	81.15	3,778.66	134.17	861.84	872.22	2.00	-2.00	0.00





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

11.									
ed Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	1.79	81.15	3,878.54	134.92	866.65	877.09	2.00	-2.00	0.00
4,089.55	0.00	0.00	3,968.07	135.13	868.03	878.49	2.00	-2.00	0.00
	3 hold at 4089.5		2,222.2.						
4,100.00	0.00	0.00	3,978.52	135.13	868.03	878.49	0.00	0.00	0.00
4,200.00	0.00	0.00	4,078.52	135.13	868.03	878.49	0.00	0.00	0.00
4,300.00	0.00	0.00	4,178.52 4,278.52	135.13	868.03 868.03	878.49 878.49	0.00 0.00	0.00 0.00	0.00
4,400.00 4,500.00	0.00 0.00	0.00 0.00	4,276.52	135.13 135.13	868.03	878.49	0.00	0.00	0.00 0.00
4,600.00	0.00	0.00	4,478.52	135.13	868.03	878.49	0.00	0.00	0.00
4,700.00	0.00	0.00	4,578.52	135.13	868.03	878.49	0.00	0.00	0.00
4,800.00	0.00	0.00	4,678.52	135.13	868.03	878.49	0.00	0.00	0.00
4,900.00	0.00	0.00	4,778.52	135.13	868.03	878.49	0.00	0.00	0.00
5,000.00	0.00	0.00	4,878.52	135.13	868.03	878.49	0.00	0.00	0.00
5,096.48	0.00	0.00	4,975.00	135.13	868.03	878.49	0.00	0.00	0.00
WASATCH	2.22	2.25	4.070.75	40= 40	000.00	070.40	2.22	2.22	2.25
5,100.00	0.00	0.00	4,978.52	135.13	868.03	878.49	0.00	0.00	0.00
5,200.00	0.00	0.00	5,078.52	135.13	868.03	878.49	0.00	0.00	0.00
5,300.00	0.00	0.00	5,178.52	135.13	868.03	878.49	0.00	0.00	0.00
5,400.00	0.00	0.00	5,278.52	135.13	868.03	878.49	0.00	0.00	0.00
5,500.00	0.00	0.00	5,378.52	135.13	868.03	878.49	0.00	0.00	0.00
5,600.00	0.00	0.00	5,478.52	135.13	868.03	878.49	0.00	0.00	0.00
5,696.48	0.00	0.00	5,575.00	135.13	868.03	878.49	0.00	0.00	0.00
	5.00 NBU 921-200		2,21212						
5,700.00	0.00	0.00	5,578.52	135.13	868.03	878.49	0.00	0.00	0.00
5,800.00	0.00	0.00	5,678.52	135.13	868.03	878.49	0.00	0.00	0.00
5,900.00	0.00	0.00	5,778.52	135.13	868.03	878.49	0.00	0.00	0.00
6,000.00	0.00	0.00	5,878.52	135.13	868.03	878.49	0.00	0.00	0.00
6,100.00	0.00	0.00	5,978.52	135.13	868.03	878.49	0.00	0.00	0.00
6,200.00	0.00	0.00	6,078.52	135.13	868.03	878.49	0.00	0.00	0.00
6,300.00	0.00	0.00	6,178.52	135.13	868.03	878.49	0.00	0.00	0.00
6,400.00	0.00	0.00	6,278.52	135.13	868.03	878.49	0.00	0.00	0.00
6,500.00	0.00	0.00	6,378.52	135.13	868.03	878.49	0.00	0.00	0.00
6,600.00	0.00 0.00	0.00	6,478.52 6,578.52	135.13	868.03	878.49 878.49	0.00 0.00	0.00 0.00	0.00
6,700.00 6,800.00	0.00	0.00 0.00	6,678.52	135.13 135.13	868.03 868.03	878.49 878.49	0.00	0.00	0.00 0.00
6,900.00	0.00	0.00	6,778.52	135.13	868.03	878.49	0.00	0.00	0.00
7,000.00	0.00	0.00	6,878.52	135.13	868.03	878.49	0.00	0.00	0.00
7,100.00	0.00	0.00	6,978.52	135.13	868.03	878.49	0.00	0.00	0.00
7,200.00	0.00	0.00	7,078.52	135.13	868.03	878.49	0.00	0.00	0.00
7,300.00	0.00	0.00	7,178.52	135.13	868.03	878.49 979.40	0.00	0.00	0.00
7,400.00 7,500.00	0.00 0.00	0.00 0.00	7,278.52 7,378.52	135.13 135.13	868.03 868.03	878.49 878.49	0.00 0.00	0.00 0.00	0.00 0.00
,									
7,600.00	0.00	0.00	7,478.52	135.13	868.03	878.49	0.00	0.00	0.00
7,700.00	0.00	0.00	7,578.52	135.13	868.03	878.49	0.00	0.00	0.00
7,800.00	0.00	0.00	7,678.52	135.13	868.03	878.49	0.00	0.00	0.00
7,900.00	0.00	0.00	7,778.52	135.13	868.03	878.49	0.00	0.00	0.00
8,000.00	0.00	0.00	7,878.52	135.13	868.03	878.49	0.00	0.00	0.00
8,081.48	0.00	0.00	7,960.00	135.13	868.03	878.49	0.00	0.00	0.00
MESAVERD									
8,100.00	0.00	0.00	7,978.52	135.13	868.03	878.49	0.00	0.00	0.00
8,200.00	0.00	0.00	8,078.52	135.13	868.03	878.49	0.00	0.00	0.00
8,300.00	0.00	0.00	8,178.52	135.13	868.03	878.49	0.00	0.00	0.00
8,400.00	0.00	0.00	8,278.52	135.13	868.03	878.49	0.00	0.00	0.00





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,500.00	0.00	0.00	8,378.52	135.13	868.03	878.49	0.00	0.00	0.00
8,600.00	0.00	0.00	8,478.52	135.13	868.03	878.49	0.00	0.00	0.00
8,700.00	0.00	0.00	8,578.52	135.13	868.03	878.49	0.00	0.00	0.00
8,800.00	0.00	0.00	8,678.52	135.13	868.03	878.49	0.00	0.00	0.00
8,900.00	0.00	0.00	8,778.52	135.13	868.03	878.49	0.00	0.00	0.00
9,000.00	0.00	0.00	8,878.52	135.13	868.03	878.49	0.00	0.00	0.00
9,100.00	0.00	0.00	8,978.52	135.13	868.03	878.49	0.00	0.00	0.00
9,200.00	0.00	0.00	9,078.52	135.13	868.03	878.49	0.00	0.00	0.00
9,300.00	0.00	0.00	9,178.52	135.13	868.03	878.49	0.00	0.00	0.00
9,400.00	0.00	0.00	9,278.52	135.13	868.03	878.49	0.00	0.00	0.00
9,500.00	0.00	0.00	9,378.52	135.13	868.03	878.49	0.00	0.00	0.00
9,600.00	0.00	0.00	9,478.52	135.13	868.03	878.49	0.00	0.00	0.00
9,700.00	0.00	0.00	9,578.52	135.13	868.03	878.49	0.00	0.00	0.00
9,800.00	0.00	0.00	9,678.52	135.13	868.03	878.49	0.00	0.00	0.00
9,900.00	0.00	0.00	9,778.52	135.13	868.03	878.49	0.00	0.00	0.00
10,000.00	0.00	0.00	9,878.52	135.13	868.03	878.49	0.00	0.00	0.00
10,100.00	0.00	0.00	9,978.52	135.13	868.03	878.49	0.00	0.00	0.00
10,200.00	0.00	0.00	10,078.52	135.13	868.03	878.49	0.00	0.00	0.00
10,300.00	0.00	0.00	10,178.52	135.13	868.03	878.49	0.00	0.00	0.00
10,347.48	0.00	0.00	10,226.00	135.13	868.03	878.49	0.00	0.00	0.00
SEGO - SEG	O_NBU 921-20G	1BS							
10,400.00	0.00	0.00	10,278.52	135.13	868.03	878.49	0.00	0.00	0.00
10,438.48	0.00	0.00	10,317.00	135.13	868.03	878.49	0.00	0.00	0.00
CASTLEGAT	E								
10,500.00	0.00	0.00	10,378.52	135.13	868.03	878.49	0.00	0.00	0.00
10,600.00	0.00	0.00	10,478.52	135.13	868.03	878.49	0.00	0.00	0.00
10,700.00	0.00	0.00	10,578.52	135.13	868.03	878.49	0.00	0.00	0.00
10,800.00	0.00	0.00	10,678.52	135.13	868.03	878.49	0.00	0.00	0.00
10,813.48	0.00	0.00	10,692.00	135.13	868.03	878.49	0.00	0.00	0.00
BLACKHAW	K								
10,900.00	0.00	0.00	10,778.52	135.13	868.03	878.49	0.00	0.00	0.00
11,000.00	0.00	0.00	10,878.52	135.13	868.03	878.49	0.00	0.00	0.00
11,100.00	0.00	0.00	10,978.52	135.13	868.03	878.49	0.00	0.00	0.00
11,200.00	0.00	0.00	11,078.52	135.13	868.03	878.49	0.00	0.00	0.00
11,300.00	0.00	0.00	11,178.52	135.13	868.03	878.49	0.00	0.00	0.00
11,400.00	0.00	0.00	11,278.52	135.13	868.03	878.49	0.00	0.00	0.00
11,413.48	0.00	0.00	11,292.00	135.13	868.03	878.49	0.00	0.00	0.00





Database: EDM US R Project: UTAH

EDM 5000.1 Single User Db US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TOC @ 5575.00 NBU 92 - plan hits target cent - Point	0.00 ter	0.00	5,575.00	135.13	868.03	14,538,192.60	2,040,224.57	40.024561	-109.571926
SEGO_NBU 921-20G1E - plan hits target cen - Circle (radius 25.00		0.00	10,226.00	135.13	868.03	14,538,192.60	2,040,224.57	40.024561	-109.571926
PBHL_NBU 921-20G1B - plan hits target cent - Circle (radius 100.0		0.00	11,292.00	135.13	868.03	14,538,192.60	2,040,224.57	40.024561	-109.571926

Casing Points						
	Measured	Vertical		Casing	Hole	
	Depth	Depth		Diameter	Diameter	
	(ft)	(ft)	Name	(in)	(in)	
	2,945.48	2,850.00 8 5/8"		8.625	11.000	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,665.23	1,629.00	GREEN RIVER				
	1,957.77	1,908.00	BIRDSNEST				
	2,473.65	2,400.00	MAHOGANY				
	5,096.48	4,975.00	WASATCH				
	8,081.48	7,960.00	MESAVERDE				
	10,347.48	10,226.00	SEGO				
	10,438.48	10,317.00	CASTLEGATE				
	10,813.48	10,692.00	BLACKHAWK				

Plan Annotations				
Measure	Measured Vertical		oordinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300	00 300.00	0.00	0.00	Start Build 2.00
1,175	00 1,161.46	20.40	131.01	Start 2039.55 hold at 1175.00 MD
3,214	55 3,106.61	114.74	737.02	Start Drop -2.00
4,089	55 3,968.07	135.13	868.03	Start 7323.93 hold at 4089.55 MD
11,413	48 11,292.00	135.13	868.03	TD at 11413.48

Surface Use Plan of Operations 1 of 13

NBU 921-20F1BS/ 921-20F4CS/ 921-20G NBU 921-20G1BS/ 921-20G1CS/ 921-20G4BS Kerr-McGee Oil Gas Onshore, L.P.

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-20G Pad

<u>API #</u>		NBU 921-20F1BS		
	Surface:	1702 FNL / 2587 FWL	SENW	Lot
	BHL:	1732 FNL / 2126 FWL	SENW	Lot
<u>API #</u>		NBU 921-20F4CS		
	Surface:	1704 FNL / 2597 FWL	SENW	Lot
	BHL:	2399 FNL / 2134 FWL	SENW	Lot
API #4304750836		NBU 921-20G		
	Surface:	1708 FNL / 2616 FWL	SWNE	Lot
	BHL:	1684 FNL / 2530 FWL	SWNE	Lot
<u>API #</u>		NBU 921-20G1BS		
	Surface:	1706 FNL / 2606 FWL	SENW	Lot
	BHL:	1570 FNL / 1807 FEL	SWNE	Lot
<u>API #</u>		NBU 921-20G1CS		
	Surface:	1712 FNL / 2636 FWL	SENW	Lot
	BHL:	1901 FNL / 1807 FEL	SWNE	Lot
<u> API #</u>		NBU 921-20G4BS		
	Surface:	1710 FNL / 2626 FWL	SENW	Lot
	BHL:	2232 FNL / 1806 FEL	SWNE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on May 8, 2012. Present were:

- · David Gordon, Melissa Wardle, Tyler Cox BLM;
- · Bucky Secakuku BIA;
- · Brad Pinecoose Ute Indian Tribe;
- · Amy Ackman Montgomery Archeological Consultants Inc.;
- · Scott Carson Smiling Lake Consulting;
- · John Slaugh, Mitch Batty Timberline Engineering & Land Surveying, Inc.;
- · Danielle Piernot, Raleen White, Doyle Holmes, Rod Anderson, Charles Chase Kerr-McGee
- $\cdot \qquad \text{Tim Horgan-Kobelski-Grasslands Consulting, Inc.} \\$
- Justin Strauss SWCA Environmental Consultants

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

NBU 921-20F1BS/ 921-20F4CS/ 921-20G NBU 921-20G1BS/ 921-20G1CS/ 921-20G4BS Kerr-McGee Oil Gas Onshore, L.P. Surface Use Plan of Operations 2 of 13

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BIA.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Surface Use Plan of Operations

NBU 921-20F1BS/ 921-20F4CS/ 921-20G NBU 921-20G1BS/ 921-20G1CS/ 921-20G4BS Kerr-McGee Oil Gas Onshore, L.P.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±285' (0.05 miles) – Section 20 (N/2) T9S R21E – On lease UTU0575 Ute Indian Tribe surface, new road from the edge of the pad to the existing road to the west. Please refer to Topo B.

C. Location of Existing Wells:

A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This is a new pad; therefore does not have any existing facilities. Gathering (pipeline) infrastructure will be utlized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is $\pm 3,505$ ° and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±3,505' (0.7 miles) – Section 20 and Section 19 T9S R21E– On-lease UTU0575 and UTU0581 Ute Indian Tribe Surface, New 8" and 10" buried gas gathering pipeline from the meter to the NBU 921-20L Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 3,505$ ° and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±3,505' (0.7 miles) – Section 20 and Section 19 T9S R21E– On-lease UTU0575 and UTU0581 Ute Indian Tribe Surface, New 6" buried liquid gathering pipeline from the separator to the NBU 921-20L Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

NBU 921-20F1BS/ 921-20F4CS/ 921-20G NBU 921-20G1BS/ 921-20G1CS/ 921-20G4BS Kerr-McGee Oil Gas Onshore, L.P. Surface Use Plan of Operations 4 of 13

Pipeline Gathering Construction

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

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Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the Vernal BIA Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The temporary ACTS lines will be permitted under a separate cover to the Ute Indian Tribe.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BIA considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BIA.

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E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Tribal lands without prior approval from the BIA. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BIA.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BIA, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BIA, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc.). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BIA. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

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The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BIA.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

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Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

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H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BIA.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BIA for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

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A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BIA will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BIA/Tribe. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications as proposed below in "Measures Common to Interim and Final Reclamation".

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BIA/Tribe.

Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for

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re-vegetation. The seed mixes will be selected from a list provided by or approved by the BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Indian Ricegrass (Nezpar)	3
Sandberg Bluegrass	0.75
Bottlebrush Squirreltail	1
Great Basin Wildrye	0.5
Crested Wheatgrass	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing Saltbrush	0.75
Forage Kochia	0.25
Total	9.5

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Weed Control

Noxious weeds will be controlled in akk orihect areas un accordance with all applicable rules and regulations.

K. Surface/Mineral Ownership:

Ute Indian Tribe
United States of America
P.O. Box 70
Bureau of Land Management
988 South 7500 East Annex Building
Fort Duschesne, UT 84026
Vernal, UT 84078
(435) 722-4307
(435)781-4400

L. Other Information:

Onsite Specifics:

· Construct low water crossing in low area near beginning of road.

Cultural and Paleontological Resources

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BIA.

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Resource Reports:

A Class I literature survey report was completed on May 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-152.

A paleontological reconnaissance survey was completed on April 10-16, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT12-14314-99 and UT12-14314-122.

Biological field survey was completed on April 10-13, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-595 and GCI-776.

Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year) ¹							
Pollutant	Development	Production	Total				
NOx	3.8	0.12	3.92				
CO	2.2	0.11	2.31				
VOC	0.1	4.9	5				
SO ₂	0.005	0.0043	0.0093				
PM_{10}	1.7	0.11	1.81				
PM _{2.5}	0.4	0.025	0.425				
Benzene	2.2E-03	0.044	0.046				
Toluene	1.6E-03	0.103	0.105				
Ethylbenzene	3.4E-04	0.005	0.005				
Xylene	1.1E-03	0.076	0.077				
n-Hexane	1.7E-04	0.145	0.145				
Formaldehyde	1.3E-02	8.64E-05	1.31E-02				

¹ Emissions include 1 producing well and associated operations traffic during the year in

which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison								
Proposed Action Production Emissions Species WRAP Phase III 2012 Uintah Basin Emission Emission Inventory ^a (ton/yr) III								
NOx	23.52	16,547	0.14%					
VOC	30	127,495	0.02%					

a http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Uintah Basin Data

API Well Number: 43047533460000

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M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst II Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

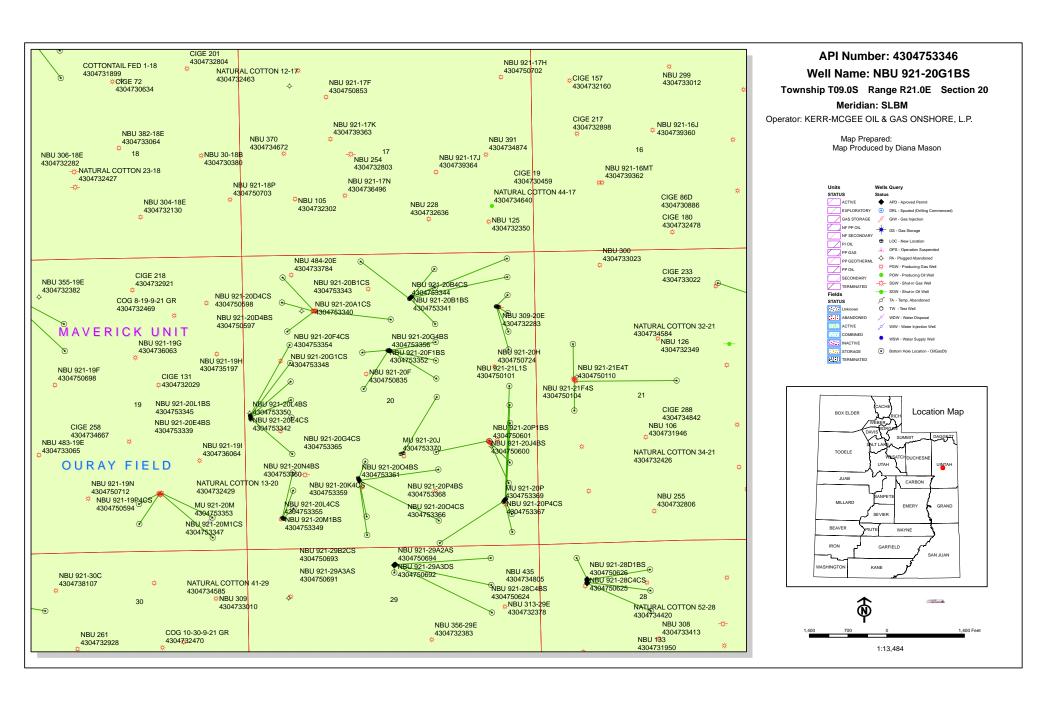
The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

	June 22, 2012
Danielle Piernot	Date



API Well Number: 43047533460000

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

December 6, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-20A PAD

BHL Sec 20 T09S R21E 0744 FNL 0491 FEL 43-047-53331 NBU 921-20A4CS Sec 20 T09S R21E 0951 FNL 0678 FEL BHL Sec 20 T09S R21E 1075 FNL 0491 FEL 43-047-53334 NBU 921-20H1BS Sec 20 T09S R21E 0950 FNL 0688 FEL BHL Sec 20 T09S R21E 1405 FNL 0491 FEL 43-047-53335 NBU 921-20H1CS Sec 20 T09S R21E 0948 FNL 0698 FEL BHL Sec 20 T09S R21E 1736 FNL 0491 FEL NBU 921-20L PAD 43-047-53333 NBU 921-20E1BS Sec 20 T09S R21E 2450 FSL 0075 FWL BHL Sec 20 T09S R21E 1571 FNL 0819 FWL 43-047-53336 NBU 921-20E1CS Sec 20 T09S R21E 2440 FSL 0076 FWL BHL Sec 20 T09S R21E 1902 FNL 0819 FWL 43-047-53339 NBU 921-20E4BS Sec 20 T09S R21E 2430 FSL 0077 FWL BHL Sec 20 T09S R21E 2233 FNL 0819 FWL 43-047-53342 NBU 921-20E4CS Sec 20 T09S R21E 2420 FSL 0078 FWL BHL Sec 20 T09S R21E 2564 FNL 0819 FWL Sec 20 T09S R21E 2410 FSL 0079 FWL 43-047-53345 NBU 921-20L1BS BHL Sec 20 T09S R21E 2396 FSL 0819 FWL BHL Sec 20 T09S R21E 1736 FSL 0818 FWL

RECEIVED: December 06, 2012

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-20B E	PAD									
43-047-53337	NBU	921-20C1BS BHL								
43-047-53338	NBU	921-20A1BS BHL								
43-047-53340	NBU	921-20A1CS BHL	Sec Sec	20	T09S T09S	R21E R21E	0764 0413	FNL FNL	2253 0491	FEL FEL
43-047-53341	NBU	921-20B1BS BHL								
43-047-53343	NBU	921-20B1CS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	0738 0578	FNL FNL	2223 1808	FEL FEL
43-047-53344	NBU	921-20B4CS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	0771 1240	FNL FNL	2261 1807	FEL FEL
NBU 921-20G F	PAD									
43-047-53346	NBU	921-20G1BS BHL	Sec	20	T09S	R21E	1706	FNL	2606	FWL
43-047-53348	NBU	921-20G1CS BHL								
43-047-53352	NBU	921-20F1BS BHL								
43-047-53354	NBU	921-20F4CS BHL								
43-047-53356	NBU	921-20G4BS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	1710 2232	FNL FNL	2626 1806	FWL FEL
NBU 921-20M I 43-047-53347	P AD NBU	921-20M1CS BHL	Sec	20	T09S	R21E	0575	FSL	0625	FWL
43-047-53349	NBU	921-20M1BS BHL								
43-047-53355	NBU	921-20L4CS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	0587 1406	FSL FSL	0609 0818	FWL FWL
NBU 921-20N F	PAD									
43-047-53351	NBU	921-20N4CS	Sec	20	T09S	R21E R21E	1256	FSL	2008	FWL
43-047-53358	NBU	921-20J4CS BHL				R21E R21E				
43-047-53359	NBU	921-20K4CS BHL				R21E R21E				
43-047-53360	NBU	921-20N4BS BHL				R21E R21E				
43-047-53361	NBU	921-2004BS BHL				R21E R21E				

Page 2

API Well Number: 43047533460000

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE) NBU 921-20P PAD BHL Sec 20 T09S R21E 2397 FNL 0491 FEL 43-047-53363 NBU 921-20I1BS Sec 20 T09S R21E 0850 FSL 0599 FEL BHL Sec 20 T09S R21E 2559 FSL 0491 FEL BHL Sec 20 T09S R21E 2229 FSL 0491 FEL BHL Sec 20 T09S R21E 0084 FSL 1804 FEL BHL Sec 20 T09S R21E 0249 FSL 0490 FEL 43-047-53368 NBU 921-20P4BS Sec 20 T09S R21E 0834 FSL 0612 FEL BHL Sec 20 T09S R21E 0579 FSL 0490 FEL NBU 921-20J PAD 43-047-53365 NBU 921-20G4CS Sec 20 T09S R21E 1726 FSL 2431 FEL BHL Sec 20 T09S R21E 2563 FNL 1806 FEL

Michael L. Coulthard Digitally signed by Michael L. coulthard Digitally signed by Michael L. coulthard or Diverse of Land Management, ou-Branch of District Diverse of Land Management, ou-Branch of District Division State 2012;12(69):94543-97070

bcc: File - Natural Buttes Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:12-6-12

Page 3

API Number	Well Name	Surface Location				
43-047-53330	NBU 921-20A4BS	Sec 20	T09S R21E	0947 FNL 0708 FEL		
43-047-53331	NBU 921-20A4CS	Sec 20	T09S R21E	0951 FNL 0678 FEL		
43-047-53333	NBU 921-20E1BS	Sec 20	T09S R21E	2450 FSL 0075 FWL		
43-047-53334	NBU 921-20H1BS	Sec 20	T09S R21E	0950 FNL 0688 FEL		
43-047-53335	NBU 921-20H1CS	Sec 20	T09S R21E	0948 FNL 0698 FEL		
43-047-53336	NBU 921-20E1CS	Sec 20	T09S R21E	2440 FSL 0076 FWL		
43-047-53337	NBU 921-20C1BS	Sec 20	T09S R21E	0777 FNL 2269 FEL		
43-047-53338	NBU 921-20A1BS	Sec 20	T09S R21E	0745 FNL 2231 FEL		
43-047-53339	NBU 921-20E4BS	Sec 20	T09S R21E	2430 FSL 0077 FWL		
43-047-53340	NBU 921-20A1CS	Sec 20	T09S R21E	0764 FNL 2253 FEL		
43-047-53341	NBU 921-20B1BS	Sec 20	T09S R21E	0751 FNL 2238 FEL		
43-047-53342	NBU 921-20E4CS	Sec 20	T09S R21E	2420 FSL 0078 FWL		
43-047-53343	NBU 921-20B1CS	Sec 20	T09S R21E	0738 FNL 2223 FEL		
43-047-53344	NBU 921-20B4CS	Sec 20	T09S R21E	0771 FNL 2261 FEL		
43-047-53345	NBU 921-20L1BS	Sec 20	T09S R21E	2410 FSL 0079 FWL		
43-047-53346	NBU 921-20G1BS	Sec 20	T09S R21E	1706 FNL 2606 FWL		
43-047-53347	NBU 921-20M1CS	Sec 20	T09S R21E	0575 FSL 0625 FWL		
43-047-53348	NBU 921-20G1CS	Sec 20	T09S R21E	1712 FNL 2636 FWL		
43-047-53349	NBU 921-20M1BS	Sec 20	T09S R21E	0581 FSL 0617 FWL		
43-047-53350	NBU 921-20L4BS	Sec 20	T09S R21E	2401 FSL 0080 FWL		
43-047-53351	NBU 921-20N4CS	Sec 20	T09S R21E	1256 FSL 2008 FWL		
43-047-53352	NBU 921-20F1BS	Sec 20	T09S R21E	1702 FNL 2587 FWL		
43-047-53354	NBU 921-20F4CS	Sec 20	T09S R21E	1704 FNL 2597 FWL		
43-047-53355	NBU 921-20L4CS	Sec 20	T09S R21E	0587 FSL 0609 FWL		
43-047-53356	NBU 921-20G4BS	Sec 20	T09S R21E	1710 FNL 2626 FWL		
43-047-53358	NBU 921-20J4CS	Sec 20	T09S R21E	1239 FSL 2019 FWL		
43-047-53359	NBU 921-20K4CS	Sec 20	T09S R21E	1265 FSL 2003 FWL		
43-047-53360	NBU 921-20N4BS	Sec 20	T09S R21E	1248 FSL 2014 FWL		
43-047-53361	NBU 921-2004BS	Sec 20	T09S R21E	1231 FSL 2024 FWL		
43-047-53362	NBU 921-20H4CS	Sec 20	T09S R21E	0842 FSL 0606 FEL		
43-047-53363	NBU 921-20I1BS	Sec 20	T09S R21E	0850 FSL 0599 FEL		
43-047-53364	NBU 921-20I1CS	Sec 20	T09S R21E	0857 FSL 0593 FEL		
43-047-53365	NBU 921-20G4CS	Sec 20 T09S R21E 1726 FSL 2431 FEL				
43-047-53366	NBU 921-2004CS	Sec 20	T09S R21E	0819 FSL 0625 FEL		
43-047-53367	NBU 921-20P4CS	Sec 20	T09S R21E	0827 FSL 0618 FEL		
43-047-53368	NBU 921-20P4BS	Sec 20	T09S R21E	0834 FSL 0612 FEL		

API Well Number: 43047533460000

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/27/2012 API NO. ASSIGNED: 43047533460000

WELL NAME: NBU 921-20G1BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SENW 20 090S 210E Permit Tech Review:

> SURFACE: 1706 FNL 2606 FWL **Engineering Review:**

> **BOTTOM:** 1570 FNL 1807 FEL Geology Review:

COUNTY: UINTAH

LATITUDE: 40.02403 LONGITUDE: -109.57564 UTM SURF EASTINGS: 621542.00 NORTHINGS: 4431396.00

FIELD NAME: NATURAL BUTTES LEASE TYPE: 1 - Federal

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE **LEASE NUMBER: UTU**0575

SURFACE OWNER: 2 - Indian **COALBED METHANE: NO**

RECEIVED AND/OR REVIEWED: LOCATION AND SITING:

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: FEDERAL - WYB000291

Potash R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 **Drilling Unit**

Board Cause No: Cause 173-14 Water Permit: 43-8496

Effective Date: 12/2/1999 **RDCC Review:**

Siting: Suspends General Siting Fee Surface Agreement

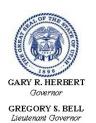
✓ Intent to Commingle R649-3-11. Directional Drill

Commingling Approved

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-20G1BS **API Well Number:** 43047533460000

Lease Number: UTU0575 Surface Owner: INDIAN Approval Date: 12/10/2012

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
 - Requests to Change Plans (Form 9) due prior to implementation
 - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
 - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

AUG 23 2012

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

5. Lease Serial No. UTU0575

Dolano of Entro Min	DI III III	UTU0575		
APPLICATION FOR PERMIT TO	DRILL OR REENTER	6. If Indian, Allottee or Tribe Nam	ne	
1a. Type of Work: ☑ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name UTU63047A	e and No.	
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other	☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. NBU 921-20G1BS	,	
	NIELLE PIERNOT	9. API Well No. 3365	5	
PO BOX 173779 Pr	. Phone No. (include area code) n: 720-929-6156 :: 720-929-7156	10. Field and Pool, or Exploratory NATURAL BUTTES		
4. Location of Well (Report location clearly and in accordance v	with any State requirements.*)	11. Sec., T., R., M., or Blk. and Su	rvey or Area	
At surface ' SENW 1706FNL 2606FWL 40.	024155 N Lat, 109.575716 W Lon	Sec 20 T9S R21E Mer SL	В.	
At proposed prod. zone SWNE 1570FNL 1807FEL 40.0	024526 N Lat, 109.572616 W Lon			
14. Distance in miles and direction from nearest town or post office APPROXIMATELY 48 MILES SOUTH OF VERNAL,	,* UT	12. County or Parish UINTAH COUNTY	13. State UT	
lease line, ft. (Also to nearest drig, unit line, if any)	No. of Acres in Lease 1600.00	17. Spacing Unit dedicated to this well		
18. Distance from proposed location to nearest well, drilling, 19.	Proposed Depth	20. BLM/BIA Bond No. on file		
	11413 MD 11292 TVD	WYB000291		
	Approximate date work will start 02/01/2013	23. Estimated duration 60-90 DAYS		
	24. Attachments			
The following, completed in accordance with the requirements of Onsi	hore Oil and Gas Order No. 1, shall be attached to the	nis form:		
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System La SUPO shall be filed with the appropriate Forest Service Office). 	Item 20 above). 5. Operator certification	ns unless covered by an existing bond ormation and/or plans as may be requi	`	
25. Signature (Electronic Submission) Nar	ne (Printed/Typed) DANIELLE PIERNOT Ph: 720-929-6156	Date 07/	/13/2012	
Title REGULATORY ANALYST II	`			
Approved by (Signature) Nam	ne (Printed/Typed) Jerry Kenczka	a Ap	R 1 1 20	
Title Assistant Field Manager Lands & Mineral Resources	VERNAL FIELD OFFIC)E		
Application approval does not warrant or certify the applicant holds legoperations thereon. Conditions of approval, if any, are attached.	gal or equitable title to those rights in the subject lear CONDITIONS OF AF	SE Which Would entitle the applicant to PPROVAL ATTACHED	o conduct	
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it States any false, fictitious or fraudulent statements or representations as	t a crime for any person knowingly and willfully to	make to any department or agency of	the United	

Additional Operator Remarks (see next page)

APR 1 6 2013

Electronic Submission #142886 verified by the BLM Well Information System For KERR MCGEE OIL&GAS ONSHORE, LP, sent to the Vernal

DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL





UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

API No:

KERR MCGEE OIL & GASS ONSHORE

NBU 921-20G1BS Lease No:

43-047-53827

Location:

Agreement:

SENW, Sec. 20, T9S, R21E

UTU-0575

533A6

170 South 500 East

OFFICE NUMBER:

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	_	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>blm_ut_vn_opreport@blm.gov</u>
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
 work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
 mitigation may be necessary for the discovered paleontologic material before construction can
 continue.
- Paint facilities "Shadow Gray."
- Conduct a raptor survey prior to construction operations if such activities would take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during the survey, operations should be conducted according to the seasonal restrictions detailed in the Uinta
- Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines.
- If construction operations are not initiated prior to April 18, 2013, an additional biological survey for Uinta Basin hookless cactus should be conducted according to current USFWS. Utilize cactus protection measures contained in the GNB BO for cacti within 300 feet of disturbance.
- Monitor construction with a permitted archaeologist.
- Double-line reserve pit.
- Utilize low water crossing on access road/pipeline route. Utilize culverts if needed.
- Monitor, with a permitted paleontologist, where pipelines/roads travel through high fossil potential areas:

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Gamma Ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.
- Cement for the surface casing will be circulated to the surface.
- Variances Granted

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
 encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
 Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB

Page 4 of 6 Well: NBU 921-20G1BS 4/9/2013

or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
 Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well by CD (compact disc).
 This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: NBU 921-20G1BS 4/9/2013

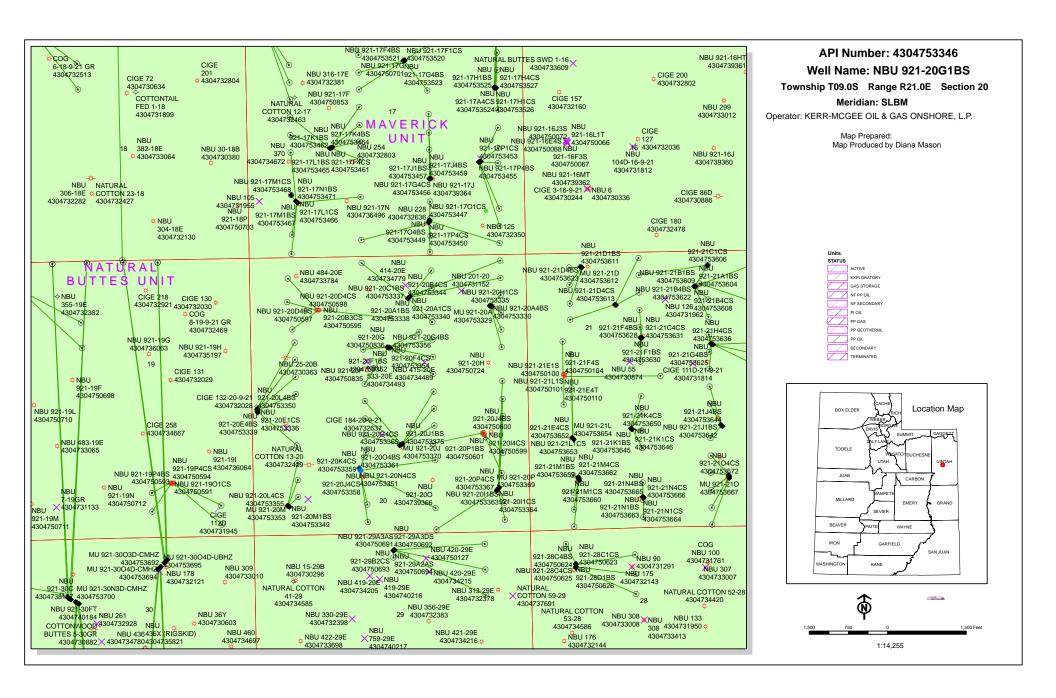
OPERATING REQUIREMENT REMINDERS:

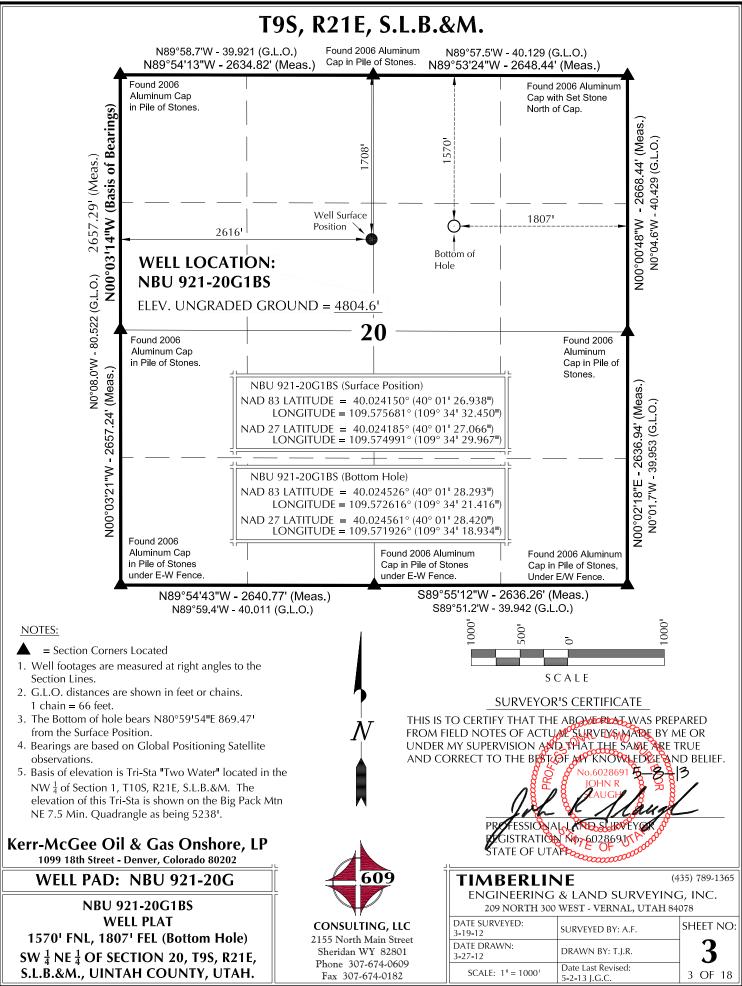
- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - o Unit agreement and/or participating area name and number, if applicable.
 - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
 Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
 future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
 BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
 hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
 be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior approval
 of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
 approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
 of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDF	RY NOTICES AND REPORTS (ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
	oposals to drill new wells, significantly or reenter plugged wells, or to drill horizon m for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-20G1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047533460000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	th Street, Suite 600, Denver, CO, 80217	PHONE NUMBER: 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1708 FNL 2616 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meridi	ian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
7	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
5/17/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion.	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER: Change SHL
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a	II pertinent details including dates, o	depths, volumes, etc.
The operator is requoriginally approved	uesting the approval of the fo APD: 1. Surface Hole Location om 1706 FNL/ 2606 FWL To 1	ollowing changes to the on Change (New Plat is	Approved by the Utah Division of Oil, Gas and Mining
			Date: June 05, 2013
			By: Laggill
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBE 720 929-6029	R TITLE Regulatory Analyst I	
SIGNATURE	0 0 2 0 0 2 0	DATE	
N/A		5/17/2013	





Kerr-McGee Oil & Gas Onshore, LP WELL PAD - NBU 921-20G WELL – NBU 921-20G1CS, NBU 921-20G4BS, NBU 921-20G1BS, NBU 921-20G, NBU 921-20F4CS & NBU 921-20F1BS Section 20, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 3.9 miles to a second Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the second Class D County Road approximately 1.2 miles to a Tribal Road to the northeast. Exit right and proceed in a northeasterly, then northerly direction along the Tribal Road approximately 0.8 miles to a second Tribal Road to the northeast. Exit right and proceed in a northeasterly, then easterly direction along the second Tribal Road approximately 0.4 miles to the proposed access road to the northeast. Follow road flags in a northeasterly direction approximately 285 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.6 miles in a southerly direction.

SHEET 18 OF 18

NBU 921-20G, and NBU 921-20G1BS

Drilling Program
1 of 4

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-20G1BS

Surface: 1708 FNL / 2616 FWL SENW BHL: 1570 FNL / 1807 FEL SWNE

Section 20 T9S R21E

Uintah County, Utah Mineral Lease: UTU 0575

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,629'	
Birds Nest	1,908'	Water
Mahogany	2,400'	Water
Wasatch	4,975'	Gas
Mesaverde	7,960'	Gas
Sego	10,226'	Gas
TVD	10,226'	
TD	10,350'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program</u>:

Please refer to the attached Drilling Program

Evaluation Program:

Please refer to the attached Drilling Program

NBU 921-20G, and NBU 921-20G1BS

Drilling Program
2 of 4

7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 10226' TVD, approximately equals 6,238 psi 0.61 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,015 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

10. Other Information:

Please refer to the attached Drilling Program.

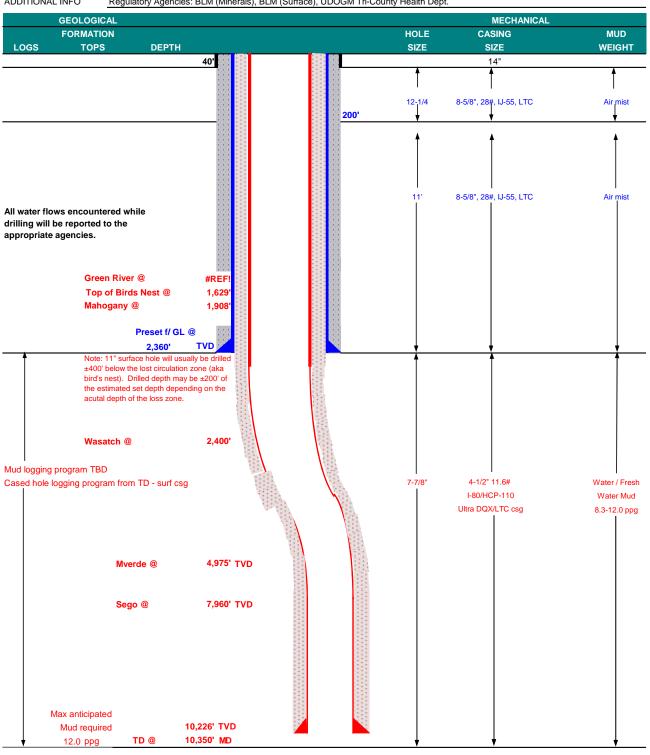
NBU 921-20G, and NBU 921-20G1BS

Drilling Program
3 of 4



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE May 16, 2013										
WELL NAME NBU 921-20G1BS		TD		10,226'	TVD	10,350' MD				
FIELD Natural	Buttes	S COUNTY Uintah STATE Ut		STATE Utah		FINISH	IED ELEVATION	4,800'		
SURFACE LOCATI	ON	SENW	1708 FNL	2616 FWL	Sec 20 T 9S	R	21E			
		Latitude:	40.024155	Longitude:	-109.575716			NAD 83	_	
BTM HOLE LOCAT	ION	SWNE	1570 FNL	1807 FEL	Sec 20 T 9S	R	21E		_	
		Latitude:	40.024561	Longitude:	-109.571926			NAD 83		
OBJECTIVE ZONE	(S)	Wasatch/M	Vasatch/Mesaverde							
ADDITIONAL INFO		Regulatory	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.							



Drilling Program NBU 921-20G, and NBU 921-20G1BS 4 of 4



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM	1								DESIGN	FACTORS	
										LTC	DQX
	SIZE	INT	ERVAL		WT.	GR.	CPLG.	BURST	COLL	APSE	TENSION
CONDUCTOR	14"	(0-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,360	28.00	IJ-55	LTC	2.29	1.70	6.01	N/A
								7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.00		2.72
								10,690	8,650	279,000	367,174
	4-1/2"	5,000	to	10,350'	11.60	HCP-110	LTC	1.11	1.00	4.40	

Surface Casing:

(Burst Assumptions: TD =

12.0

ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ (Collapse Assumption: Fully Evacuated Casing, Max MW)

7000

0.61 psi/ft = bottomhole gradient

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	Т	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele					
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water to s	urface, opt	ion 2 will be	utilized		
Option 2 LEAD	1,860'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00		3.82
		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	1,900'	Premium Lite II +0.25 pps celloflake + .4% FL-52	130	35%	12.00		3.38
		+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +					
		1.2% Sodium Metasilicate + .05 lbs/sk Static Free					
TAIL	8,450'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,990	35%	14.30		1.31
		+ 1.2% Sodium Metasilicate + .5 % EC-1					
		+.002 gps FP-6L + 2% Bentonite II					

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

DRILLING ENGINEER:		DATE:
	Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott	
DRILLING SUPERINTENDENT:		DATE:
	Kenny Gathings / Lovel Young	

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

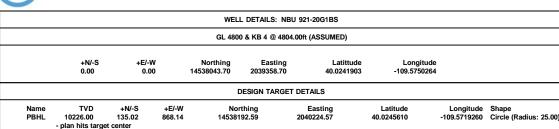
Sundry Number: 38007 AProjecte lutanutulou (feet) (AAD27,52664 62N000

Scientific Drilling

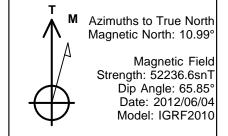
Site: NBU 921-20G PAD Well: NBU 921-20G1BS

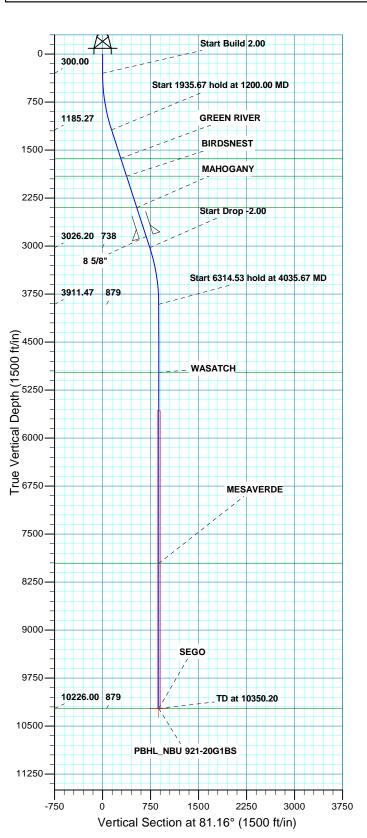
Wellbore: OH

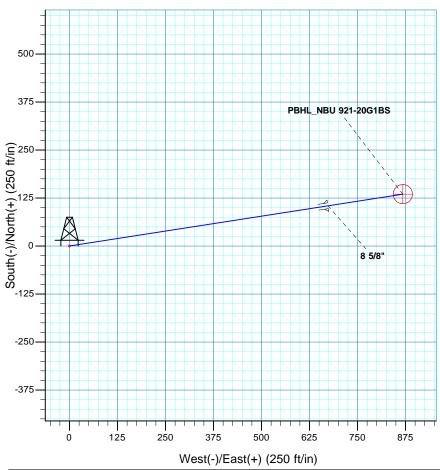
Design: PLAN #1 PERMIT











				West(-)/E	East((+) (25	50 ft/i	in)	
				SEC	TION	I DETAI	LS			
MD 0.00 300.00 1200.00 3135.67 4035.67 10350.20	Inc 0.00 0.00 18.00 18.00 0.00	81.16 0.00	TVD 0.00 300.00 1185.27 3026.20 3911.47 10226.00	+N/-S 0.00 0.00 21.55 113.48 135.02 135.02	1: 7: 8:	0.00 0.00 38.55 29.59 68.14 68.14	Dleg 0.00 0.00 2.00 0.00 2.00 0.00	TFace 0.00 0.00 81.16 0.00 180.00 0.00	VSect 0.00 0.00 140.21 738.37 878.58 878.58	PBHL_NBU 921-20G1BS
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION20 T10S R21E System Datum:Mean Sea Level						FORMATION TOP TVDPath MDPath 1629.00 1666.57 1908.00 1959.92 2400.00 2477.24 4975.00 5099.20 7960.00 8084.20 10226.00 10350.20			Path 66.57 59.92 77.24 99.20 84.20	Formation GREEN RIVER BIRDSNEST MAHOGANY WASATCH MESAVERDE SEGO
			TVD 2850.00		MD 0.40	DETAII	Name 8 5/8'			
							Plan: PL	AN #1 PI	ERMIT (N	BU 921-20G1BS/OH)

REC

Created By: Gabe Kendall

Date: 13:43, April 30 2013



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-20G PAD NBU 921-20G1BS

OH

Plan: PLAN #1 PERMIT

Standard Planning Report

30 April, 2013





SDIPlanning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Site

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: Zone 12N (114 W to 108 W)

System Datum: Mean Sea Level

NBU 921-20G PAD, SECTION 20 T10S R21E

Sition: Northing: 14,538,038.24 usft Latitude:

 Site Position:
 Northing:
 14,538,038.24 usft
 Latitude:
 40.0241740

 From:
 Lat/Long
 Easting:
 2,039,388.30 usft
 Longitude:
 -109.5749210

 Position Uncertainty:
 0.00 ft
 Slot Radius:
 13.200 in
 Grid Convergence:
 0.92 °

Well NBU 921-20G1BS, 1706 FNL 2606 FWL

 Well Position
 +N/-S
 5.94 ft
 Northing:
 14,538,043.70 usft
 Latitude:
 40.0241903

 +E/-W
 -29.51 ft
 Easting:
 2,039,358.70 usft
 Longitude:
 -109.5750264

Position Uncertainty0.00 ftWellhead Elevation:Ground Level:4,800.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 2012/06/04 10.99 65.85 52.237

PLAN #1 PERMIT Design Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 81.16

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	18.00	81.16	1,185.27	21.55	138.55	2.00	2.00	0.00	81.16	
3,135.67	18.00	81.16	3,026.20	113.48	729.59	0.00	0.00	0.00	0.00	
4,035.67	0.00	0.00	3,911.47	135.02	868.14	2.00	-2.00	0.00	180.00	
10,350.20	0.00	0.00	10,226.00	135.02	868.14	0.00	0.00	0.00	0.00 P	BHL_NBU 921-20G



SDIPlanning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Minimum Curvature

,.g										
nned Survey	<i>'</i>									
Measur Depti (ft)		lination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	00.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
20	00.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
30	00.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start E	Build 2.00									
40	00.00	2.00	81.16	399.98	0.27	1.72	1.75	2.00	2.00	0.00
50	00.00	4.00	81.16	499.84	1.07	6.90	6.98	2.00	2.00	0.00
60	00.00	6.00	81.16	599.45	2.41	15.51	15.69	2.00	2.00	0.00
70	00.00	8.00	81.16	698.70	4.28	27.55	27.88	2.00	2.00	0.00
80	00.00	10.00	81.16	797.47	6.69	43.01	43.52	2.00	2.00	0.00
90	00.00	12.00	81.16	895.62	9.62	61.86	62.60	2.00	2.00	0.00
4.00		44.00	04.40	000.00	40.00	04.00	05.40	0.00	0.00	0.00
	00.00	14.00	81.16	993.06	13.08	84.09	85.10	2.00	2.00	0.00
	00.00	16.00	81.16	1,089.64	17.06	109.66	110.98	2.00	2.00	0.00
	00.00	18.00	81.16	1,185.27	21.55	138.55	140.21	2.00	2.00	0.00
	1935.67 hold	d at 1200.00	MD							
,	00.00	18.00	81.16	1,280.37	26.30	169.08	171.11	0.00	0.00	0.00
1,40	00.00	18.00	81.16	1,375.48	31.05	199.62	202.02	0.00	0.00	0.00
1 50	0.00	18.00	81.16	1,470.59	35.80	230.15	232.92	0.00	0.00	0.00
	0.00	18.00	81.16	1,565.69	40.55	260.69	263.82	0.00	0.00	0.00
	6.57	18.00	81.16	1,629.00	43.71	281.01	284.39	0.00	0.00	0.00
		10.00	01.10	1,023.00	75.71	201.01	204.00	0.00	0.00	0.00
	N RIVER	10.00	01.16	1 660 90	45.00	204.22	204.72	0.00	0.00	0.00
,	00.00	18.00	81.16	1,660.80	45.29	291.22	294.72	0.00	0.00	0.00
1,80	00.00	18.00	81.16	1,755.90	50.04	321.75	325.62	0.00	0.00	0.00
1,90	00.00	18.00	81.16	1,851.01	54.79	352.29	356.52	0.00	0.00	0.00
1,95	9.92	18.00	81.16	1,908.00	57.64	370.59	375.04	0.00	0.00	0.00
BIRDS	SNEST									
	00.00	18.00	81.16	1,946.11	59.54	382.82	387.43	0.00	0.00	0.00
	00.00	18.00	81.16	2,041.22	64.29	413.36	418.33	0.00	0.00	0.00
	0.00	18.00	81.16	2,136.33	69.04	443.89	449.23	0.00	0.00	0.00
,	00.00	18.00	81.16	2,231.43	73.79	474.43	480.13	0.00	0.00	0.00
	00.00	18.00	81.16	2,326.54	78.54	504.96	511.03	0.00	0.00	0.00
	7.24	18.00	81.16	2,400.00	82.21	528.55	534.90	0.00	0.00	0.00
	GANY									
	00.00	18.00	81.16	2,421.64	83.29	535.50	541.93	0.00	0.00	0.00
2,60	00.00	18.00	81.16	2,516.75	88.04	566.03	572.84	0.00	0.00	0.00
2.70	00.00	18.00	81.16	2,611.85	92.79	596.57	603.74	0.00	0.00	0.00
, -	00.00	18.00	81.16	2,706.96	97.53	627.10	634.64	0.00	0.00	0.00
	00.00	18.00	81.16	2,802.06	102.28	657.63	665.54	0.00	0.00	0.00
,	0.40	18.00	81.16	2,850.00	104.68	673.03	681.12	0.00	0.00	0.00
8 5/8"		. 5.00	30	_,_,_,		2. 0.00	··-	0.00	0.00	0.00
	0.00	18.00	81.16	2,897.17	107.03	688.17	696.44	0.00	0.00	0.00
	00.00	18.00	81.16	2,992.28	111.78	718.70	727.35	0.00	0.00	0.00
3,13	5.67	18.00	81.16	3,026.20	113.48	729.59	738.37	0.00	0.00	0.00
Start I	Orop -2.00									
3,20	00.00	16.71	81.16	3,087.60	116.43	748.56	757.56	2.00	-2.00	0.00
3,30	00.00	14.71	81.16	3,183.86	120.59	775.32	784.64	2.00	-2.00	0.00
3,40	00.00	12.71	81.16	3,281.00	124.23	798.74	808.34	2.00	-2.00	0.00
	00.00	10.71	81.16	3,378.91	127.35	818.80	828.64	2.00	-2.00	0.00
	00.00	8.71	81.16	3,477.48	129.94	835.47	845.52	2.00	-2.00	0.00
	00.00	6.71	81.16	3,576.57	132.01	848.73	858.94	2.00	-2.00	0.00
	00.00	4.71	81.16	3,676.06	133.54	858.57	868.89	2.00	-2.00	0.00
3,90	00.00	2.71	81.16	3,775.85	134.53	864.97	875.37	2.00	-2.00	0.00
	00.00	0.71	81.16	3,875.80	134.99	867.92	878.36	2.00	-2.00	0.00



SDI Planning Report



Database: EDM5000-Company: US ROCKI

EDM5000-RobertS-Local

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Project:

wellbore:

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

True

Minimum Curvature

nned Survey									
Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)
(11)	(°)	(°)	(11)	(ft)	(ft)	(11)	(710011)	(710011)	(710011)
4,035.67	7 0.00	0.00	3,911.47	135.02	868.14	878.58	2.00	-2.00	0.00
Start 6314	.53 hold at 4035.67	7 MD							
4,100.00	0.00	0.00	3,975.80	135.02	868.14	878.58	0.00	0.00	0.00
4,200.00	0.00	0.00	4,075.80	135.02	868.14	878.58	0.00	0.00	0.00
4,300.00	0.00	0.00	4,175.80	135.02	868.14	878.58	0.00	0.00	0.00
4 400 00	0.00	0.00	4 075 00	125.00	060 14	070 50	0.00	0.00	0.00
4,400.00 4,500.00		0.00	4,275.80 4,375.80	135.02 135.02	868.14 868.14	878.58 878.58	0.00 0.00	0.00	0.00
4,600.00		0.00	4,475.80	135.02	868.14	878.58	0.00	0.00	0.00
4,700.00		0.00	4,575.80	135.02	868.14	878.58	0.00	0.00	0.00
4,800.00		0.00	4,675.80	135.02	868.14	878.58	0.00	0.00	0.00
4,000.00	0.00	0.00	4,073.00	133.02	000.14	070.30	0.00		
4,900.00		0.00	4,775.80	135.02	868.14	878.58	0.00	0.00	0.00
5,000.00		0.00	4,875.80	135.02	868.14	878.58	0.00	0.00	0.00
5,099.20	0.00	0.00	4,975.00	135.02	868.14	878.58	0.00	0.00	0.00
WASATCH	1								
5,100.00	0.00	0.00	4,975.80	135.02	868.14	878.58	0.00	0.00	0.00
5,200.00	0.00	0.00	5,075.80	135.02	868.14	878.58	0.00	0.00	0.00
5,300.00	0.00	0.00	5.175.80	135.02	868.14	878.58	0.00	0.00	0.00
5,400.00		0.00	5,175.80 5,275.80	135.02	868.14 868.14	878.58 878.58	0.00	0.00	0.00
5,500.00		0.00	5,375.80	135.02	868.14	878.58	0.00	0.00	0.00
5,600.00		0.00	5,475.80	135.02	868.14	878.58	0.00	0.00	0.00
5,700.00		0.00	5,575.80	135.02	868.14	878.58	0.00	0.00	0.00
3,700.00		0.00	3,373.60		000.14	070.30	0.00		
5,800.00		0.00	5,675.80	135.02	868.14	878.58	0.00	0.00	0.00
5,900.00		0.00	5,775.80	135.02	868.14	878.58	0.00	0.00	0.00
6,000.00		0.00	5,875.80	135.02	868.14	878.58	0.00	0.00	0.00
6,100.00		0.00	5,975.80	135.02	868.14	878.58	0.00	0.00	0.00
6,200.00	0.00	0.00	6,075.80	135.02	868.14	878.58	0.00	0.00	0.00
6,300.00	0.00	0.00	6,175.80	135.02	868.14	878.58	0.00	0.00	0.00
6,400.00		0.00	6,275.80	135.02	868.14	878.58	0.00	0.00	0.00
6,500.00		0.00	6,375.80	135.02	868.14	878.58	0.00	0.00	0.00
6,600.00		0.00	6,475.80	135.02	868.14	878.58	0.00	0.00	0.00
6,700.00		0.00	6,575.80	135.02	868.14	878.58	0.00	0.00	0.00
0.000.00	0.00	0.00	0.075.00	405.00	000.44	070.50	0.00	0.00	0.00
6,800.00		0.00	6,675.80	135.02	868.14	878.58	0.00	0.00	0.00
6,900.00		0.00	6,775.80	135.02	868.14	878.58	0.00	0.00	0.00
7,000.00 7,100.00		0.00 0.00	6,875.80 6,975.80	135.02 135.02	868.14 868.14	878.58 878.58	0.00 0.00	0.00 0.00	0.00 0.00
7,100.00		0.00	6,975.80 7,075.80	135.02	868.14 868.14	878.58 878.58	0.00	0.00	0.00
7,300.00		0.00	7,175.80	135.02	868.14	878.58	0.00	0.00	0.00
7,400.00		0.00	7,275.80	135.02	868.14	878.58	0.00	0.00	0.00
7,500.00		0.00	7,375.80	135.02	868.14	878.58	0.00	0.00	0.00
7,600.00		0.00	7,475.80	135.02	868.14	878.58	0.00	0.00	0.00
7,700.00	0.00	0.00	7,575.80	135.02	868.14	878.58	0.00	0.00	0.00
7,800.00	0.00	0.00	7,675.80	135.02	868.14	878.58	0.00	0.00	0.00
7,900.00		0.00	7,775.80	135.02	868.14	878.58	0.00	0.00	0.00
8,000.00		0.00	7,875.80	135.02	868.14	878.58	0.00	0.00	0.00
8,084.20		0.00	7,960.00	135.02	868.14	878.58	0.00	0.00	0.00
MESAVER			,						
8,100.00		0.00	7,975.80	135.02	868.14	878.58	0.00	0.00	0.00
,									
8,200.00		0.00	8,075.80	135.02	868.14	878.58	0.00	0.00	0.00
8,300.00		0.00	8,175.80	135.02	868.14	878.58	0.00	0.00	0.00
8,400.00		0.00	8,275.80	135.02	868.14	878.58	0.00	0.00	0.00
8,500.00		0.00	8,375.80	135.02	868.14	878.58	0.00	0.00	0.00
8,600.00	0.00	0.00	8,475.80	135.02	868.14	878.58	0.00	0.00	0.00
8,700.00	0.00	0.00	8,575.80	135.02	868.14	878.58	0.00	0.00	0.00



SDIPlanning Report



Database: Company: Project: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

T....

Minimum Curvature

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
8,800.00	0.00	0.00	8,675.80	135.02	868.14	878.58	0.00	0.00	0.00
8,900.00	0.00	0.00	8,775.80	135.02	868.14	878.58	0.00	0.00	0.00
9,000.00	0.00	0.00	8,875.80	135.02	868.14	878.58	0.00	0.00	0.00
9,100.00	0.00	0.00	8,975.80	135.02	868.14	878.58	0.00	0.00	0.00
9,200.00	0.00	0.00	9,075.80	135.02	868.14	878.58	0.00	0.00	0.00
9,300.00	0.00	0.00	9,175.80	135.02	868.14	878.58	0.00	0.00	0.00
9,400.00	0.00	0.00	9,275.80	135.02	868.14	878.58	0.00	0.00	0.00
9,500.00	0.00	0.00	9,375.80	135.02	868.14	878.58	0.00	0.00	0.00
9,600.00	0.00	0.00	9,475.80	135.02	868.14	878.58	0.00	0.00	0.00
9,700.00	0.00	0.00	9,575.80	135.02	868.14	878.58	0.00	0.00	0.00
9,800.00	0.00	0.00	9,675.80	135.02	868.14	878.58	0.00	0.00	0.00
9,900.00	0.00	0.00	9,775.80	135.02	868.14	878.58	0.00	0.00	0.00
10,000.00	0.00	0.00	9,875.80	135.02	868.14	878.58	0.00	0.00	0.00
10,100.00	0.00	0.00	9,975.80	135.02	868.14	878.58	0.00	0.00	0.00
10,200.00	0.00	0.00	10,075.80	135.02	868.14	878.58	0.00	0.00	0.00
10,300.00	0.00	0.00	10,175.80	135.02	868.14	878.58	0.00	0.00	0.00
10,350.20	0.00	0.00	10,226.00	135.02	868.14	878.58	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-20G1B - plan hits target cent - Circle (radius 25.00		0.00	10,226.00	135.02	868.14	14,538,192.60	2,040,224.57	40.0245610	-109.5719260

Casing Points							
	Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter	
	(ft)	(ft)		Name	(in)	(in)	
	2,950.40	2,850.00	8 5/8"		8.625	11.000	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,666.57	1,629.00	GREEN RIVER				
	1,959.92	1,908.00	BIRDSNEST				
	2,477.24	2,400.00	MAHOGANY				
	5,099.20	4,975.00	WASATCH				
	8,084.20	7,960.00	MESAVERDE				
	10,350.20	10,226.00	SEGO				

RECEIVED: May. 17, 2013



SDIPlanning Report



Database: EDM5000-RobertS-Local Company: US ROCKIES REGION P

US ROCKIES REGION PLANNING
UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20G PAD

 Well:
 NBU 921-20G1BS

Wellbore: OH

Project:

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20G1BS

GL 4800 & KB 4 @ 4804.00ft (ASSUMED) GL 4800 & KB 4 @ 4804.00ft (ASSUMED)

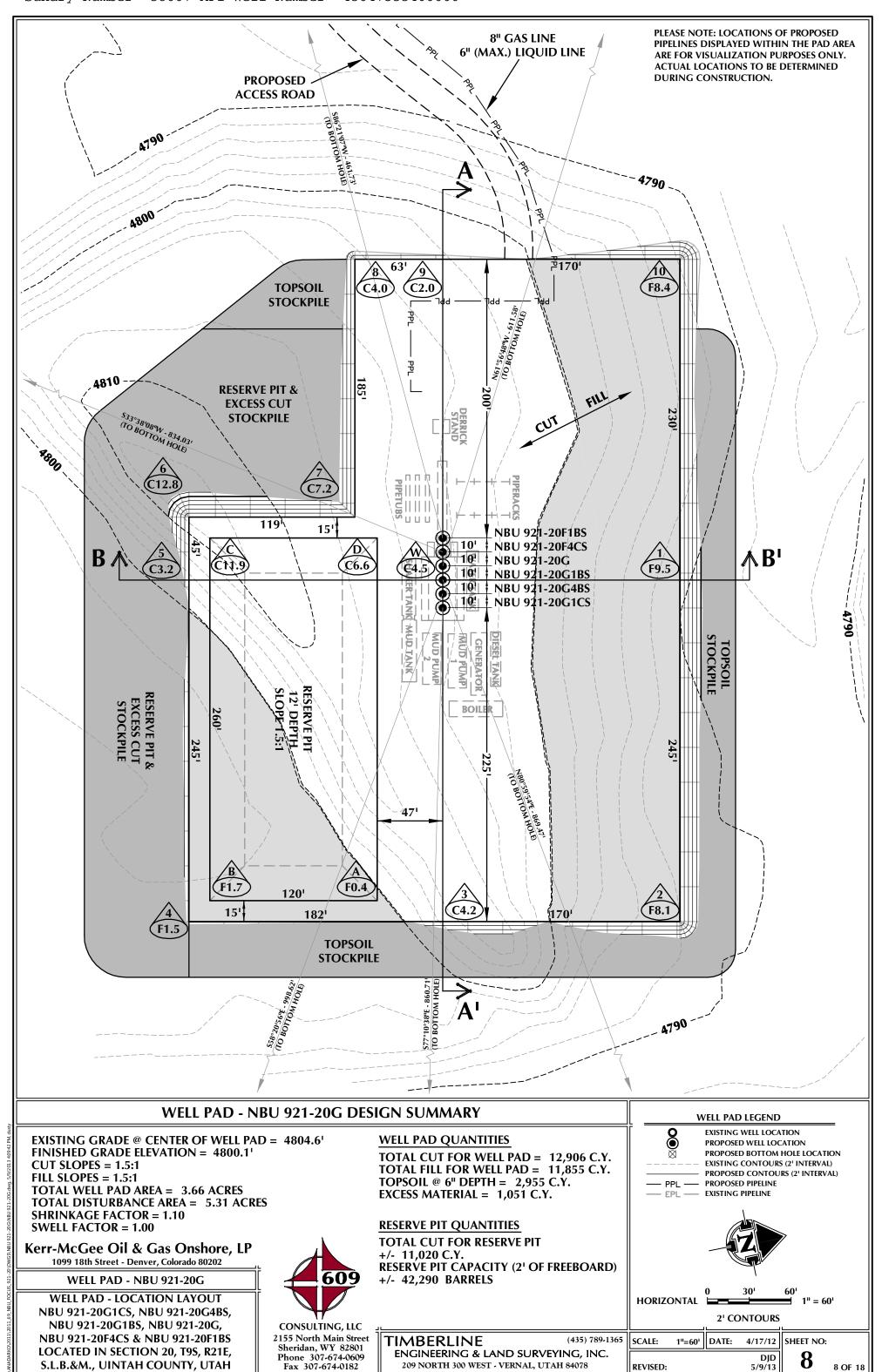
True

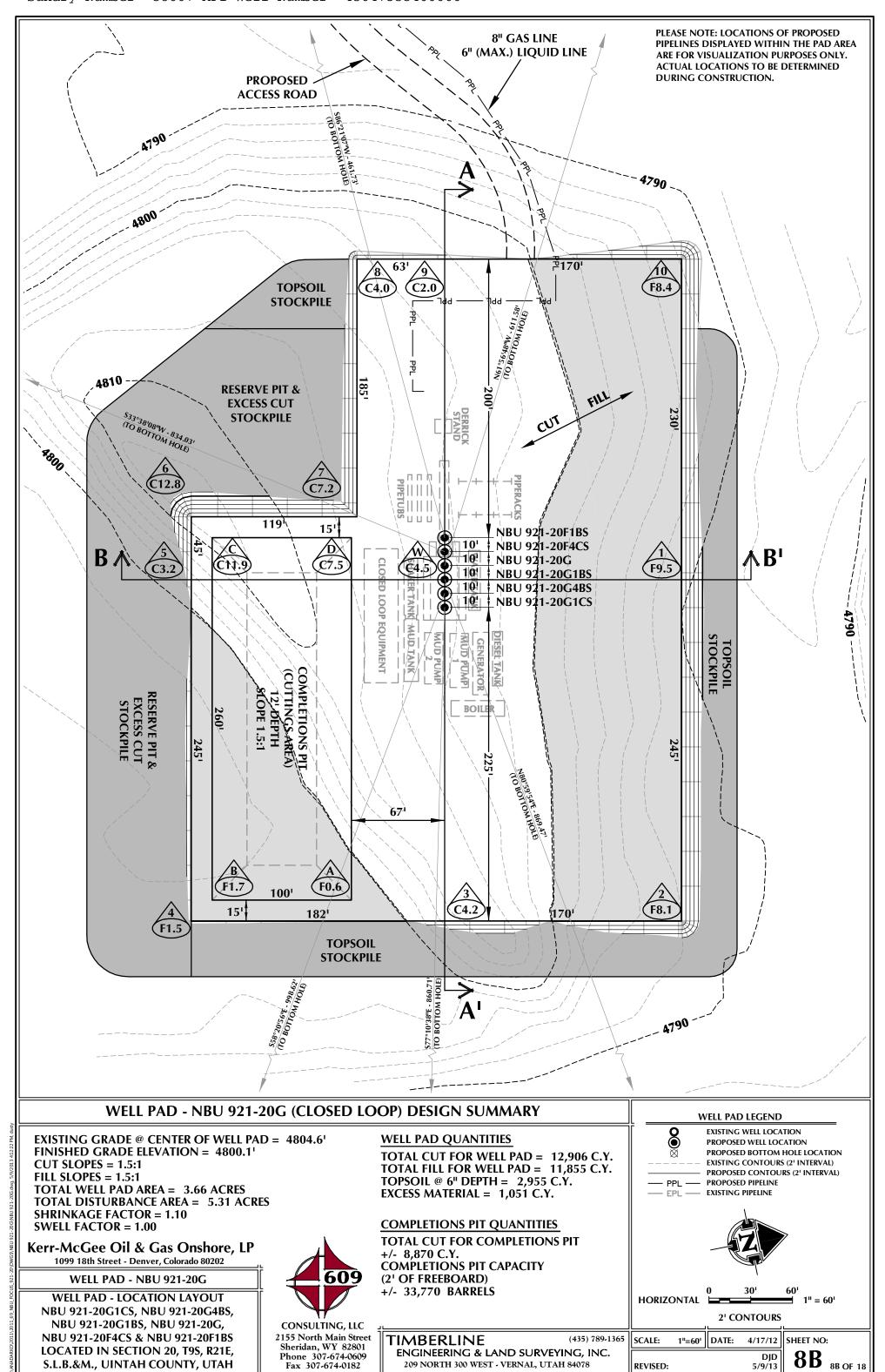
Minimum Curvature

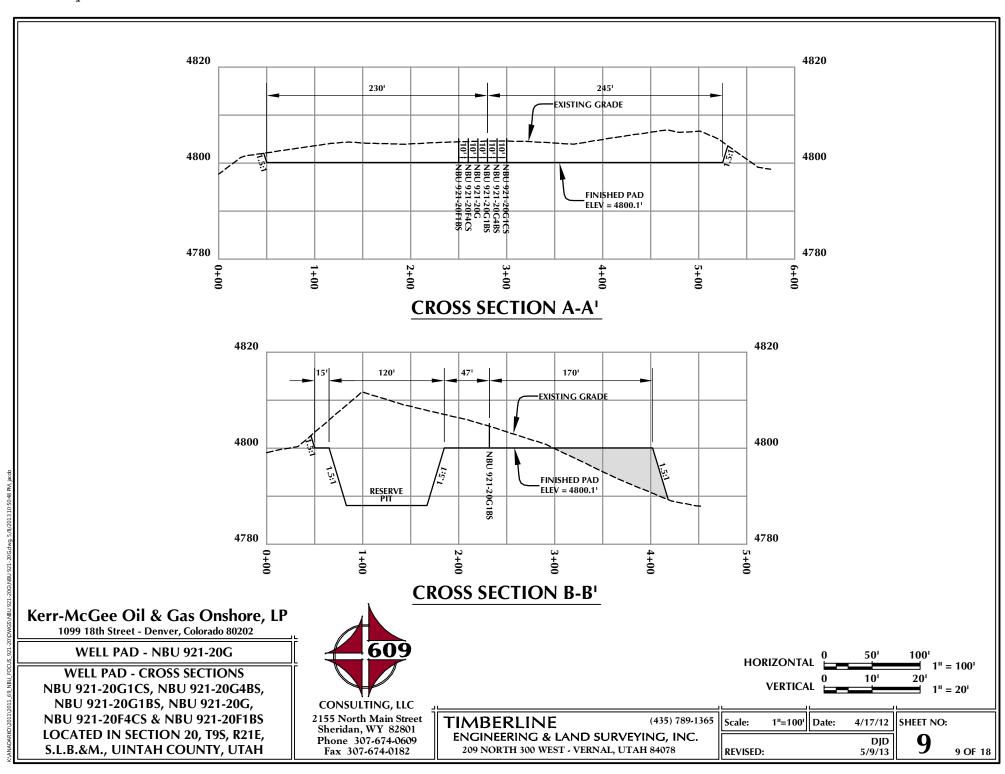
n Annotations				
Measured	Vertical	Local Coor	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,200.00	1,185.27	21.55	138.55	Start 1935.67 hold at 1200.00 MD
3,135.67	3,026.20	113.48	729.59	Start Drop -2.00
4,035.67	3,911.47	135.02	868.14	Start 6314.53 hold at 4035.67 MD
10,350.20	10,226.00	135.02	868.14	TD at 10350.20

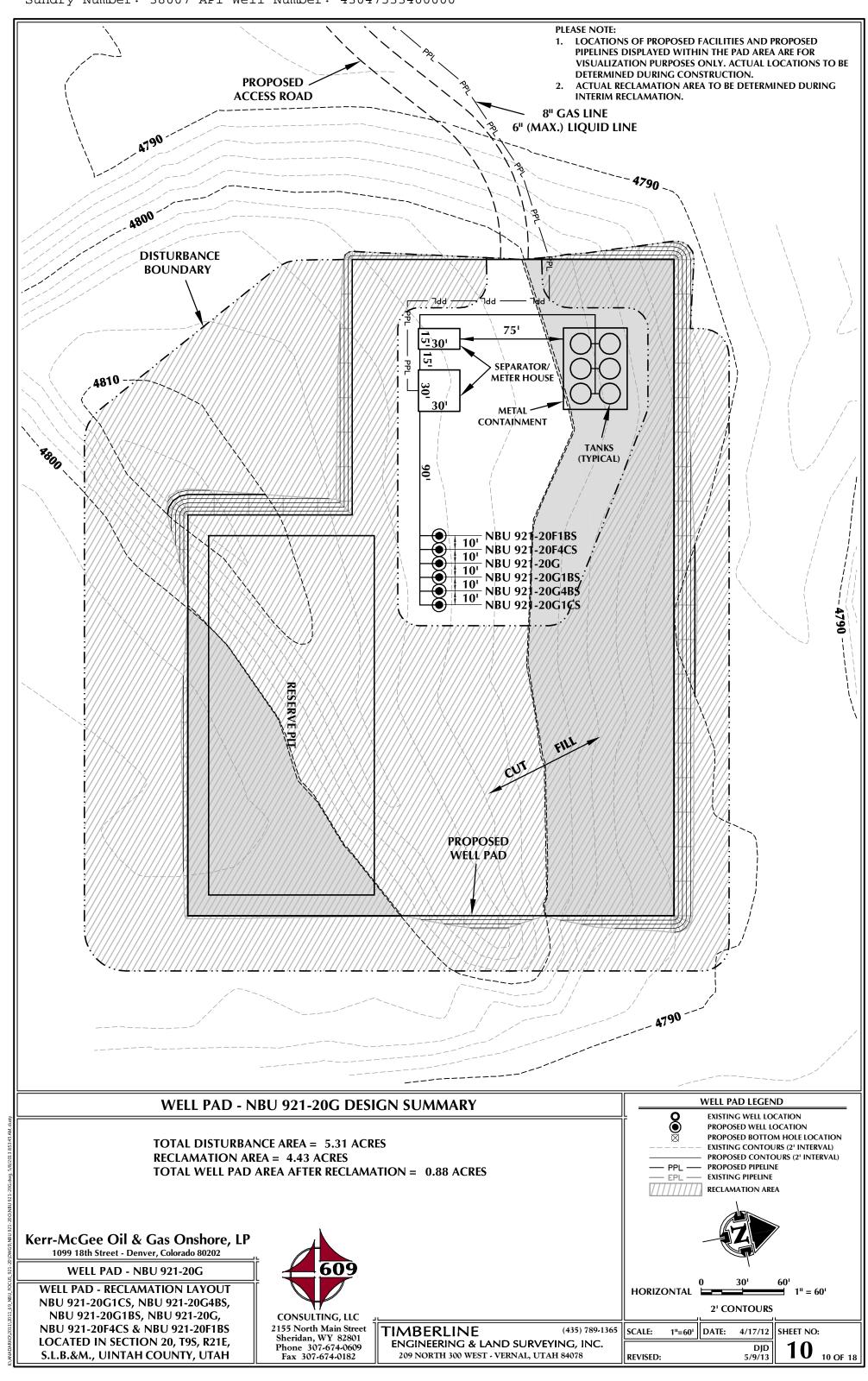
RECEIVED: May. 17, 2013

1	SURFACE POSITION					BOTTOM HOLE							
WELL NAME				NAD27				NAE	_		NAD27		
NBU	40°01'26.900"	109°34'32.				712' FNL	40°01'2			IGITUDE 34'21.410"	LATITUDE 40°01'25.150"	LONGITUDE 109°34'18.928"	1901' FNL
921-20G1CS	40.024139°	109.57561	1° 40.02417	4° 109.57	4921° 2	536' FWL	40.023	617°	109.5	72614°	40.023653°	109.571924°	1807' FEL
NBU 921-20G4BS	40°01'26.919" 40.024144°	109°34'32. 109.575645		1.000		710' FNL 526' FWL	40°01'2 40.022		1	34'21.391" 72609°	40°01'21.880" 40.022744°	109°34'18.909" 109.571919°	2232' FNL 1806' FEL
NBU	40°01'26.938"	109°34'32.	450" 40°01'27.	066" 109°34		708' FNL	40°01'2	28.293"	109°3	34'21.416"	40°01'28.420"	109°34'18.934"	1570' FNL
921-20G1BS NBU	40.024150° 40°01'26.958"	109.57568°				516' FWL 706' FNL	40.024 40°01'2		_	72616° 34'39.517"	40.024561° 40°01'29.920"	109.571926° 109°34'37.034"	1807' FEL 1419' FNL
921-20G	40.024155°	109.575716	6° 40.024190	0° 109.57		606' FWL	40.024	942°	109.5	77644°	40.024978°	109°34'37.034" 109.576954°	2067¹ FWL
NBU 921-20F4CS	40°01'26.977" 40.024160°	109°34'32. 109.57575		1.05 5 1		704' FNL 597' FWL	40°01'2			34'38.628" 77397°	40°01'20.238" 40.022288°	109°34'36.145" 109.576707°	2399' FNL 2134' FWL
NBU	40°01'26.996"		828" 40°01'27.	124" 109°34		702' FNL	40°01'2	26.700"		34'38.750"		109.376707 109°34'36.267"	
921-20F1BS	40.024166°	109.575786	_	100107		587' FWL	40.024			77430°	40.024119°	109.576741°	2126' FWL
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST		NAME	NOR		EAST	WELL NAM	IE NORTH	EAST
NBU	-191.0	839.2	NBU	-524.0'	850.1	NBU		136.		858.81	NBU	287.6	-539.7'
921-20G1CS WELL NAME	NORTH	EAST	921-20G4BS WELL NAME	NORTH	EAST	921-20	OG1BS	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			921-20G	207.10	333.7
NBU	-694.4 ¹	-462.0'	NBU	-29.4	-460.8					BASIS	S OF BEARING	GS IS THE WES	TIINE
921-20F4CS	-094.4	-402.0	921-20F1BS	-29.4	-400.0							SECTION 20, T	
										S.L.B.	.&M. WHICH	IS TAKEN FRO	M
	30.	_		.09								NING SATELLIT	
	9 × ×	-0		9						OR2F	KVAHONS I	o bear noo°o	3 14 VV.
										ı			
/		SCALE								- 1			
//													
										Į,			
	No 42									Ň			
1	V0705	ζ9°								v			
	~ JA/	Q.02											
'	TOR	18"NV 33	? o		SS S	S							
,	To Botto	18"W 61	3°		F1BS	1BS 4BS	CS						
, , , , , , , , , , , , , , , , , , ,	To Botto	18"W 67 10/0/67	3° 7.5 ₈ ,		20F1BS 20F4CS	0C1BS 0C4BS	C1CS						
N78°45	(To Botto	18"W 61 100/8	3° 7.58′		21-20F1BS 21-20F4CS	1-20G1BS -20G4BS	.70G1CS				on 99833°)	
$N78^{\circ}45$ $AZ = \overline{281}$	N61°56'3 (To Botto	18"W 61 1m Hole)	3° 7.58'	<u></u>) 921-20F1BS 921-20F4CS 921-20E4CS	921-20G1BS 921-20G4BS	57-70G1CS			AZ	=80.99833°	9.47'	
$ \frac{N78^{\circ}45}{AZ = 281} $.242 _{78°} —		_		IBU 921-20F1BS BU 921-20F4CS 3U 921-20F4CS	U 921-20G1BS U 921-20G4BS J 921-20G4BS	S21-70C1CS			AZ N80°5	=80.99833° 9'54"E - 865	o 9.47' — — · ole)	
$ \frac{N78^{\circ}45}{AZ = 281} $	242780-	 6 35194°			NBU 921-20F1BS NBU 921-20F4CS NBU 921-20F4CS	NBU 921-20G1BS VBU 921-20G1BS VBU 921-20G4BS	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		_ —	AZ N80°5 (To	=80.99833° 9'54"E - 869 Bottom Ho	9.47'	
$ \frac{N78^{\circ}45}{AZ = 281} $.24278° Az=26 \$86°21'07	-	1.73'		NBU 921-20F1BS NBU 921-20F4CS NBU 921-30F4CS	NBU 921-20G1BS NBU 921-20G4BS		_ — -	_ —	AZ N80°5 (To	=80.99833° 9'54"E - 86 <u>'</u> Bottom Ho	9.47' — — · Jle)	
$N78 \circ 45$ $AZ = \overline{281}$.24278° Az=26 \$86°21'07	 6 35194°	1.73'		NBU NBU NBU	NBU NBU NBU	SJ1502-125		_ —	AZ N80°5 (To	Bottom Ho	le)	
$ \begin{array}{c} N78^{\circ}45 \\ \overline{AZ} = \overline{281}. \end{array} $.24278° Az=26 \$86°21'07	-	1.73'		OF TOTAL OF THE STATE OF THE ST	NBU NBU NBU	SJ1502-1-50			AZ N80°5 (To	Bottom Ho	le)	
$ \begin{array}{c} N78^{\circ}45 \\ AZ = \overline{281}. \end{array} $.24278° Az=26 \$86°21'07	-	1.73'		NBU NBU NBU	NBU NBU NBU	1			AZ N80°5 (To	Bottom Ho	le)	_
$N78°45$ $AZ = \overline{281}$.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	/ / / / / / / / / / / / / / / / / / /			N80°5	Bottom Ho $S77^{\circ}10$ $(To B)$	7=102.82276 0'38"E - 860 Bottom 1	3°:71'
$ \begin{array}{c} N78^{\circ}45 \\ AZ = \overline{281} \end{array} $.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	/ / / / / / / / / / / / / / / / / / /			N80°5 (To	Bottom Ho S77°1(To B	7=102.82276 0'38"E - 860 Bottom 1	30
$N78^{\circ}45$ $AZ = 281$.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	/ / / / / / / / / / / / / / / / / / /			N80°5 (To	Bottom Ho S77°1(To B	7=102.82276 0'38"E - 860 Bottom 1	30.711
$ \begin{array}{c} N78^{\circ}45 \\ AZ = \overline{281}. \end{array} $.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	1 / / / / / / / / / / / / / / / / / / /			N80°5 (To	Bottom Ho S77°1(To B	7=102.82276 0'38"E - 860 Bottom 1	3°.71'
$ \begin{array}{c} N78^{\circ}45 \\ AZ = \overline{281} \end{array} $.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	(N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	30.711
$ \begin{array}{c} N78^{\circ}45 \\ AZ = 281 \end{array} $.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	() () () () () () () () () ()			N80°5 (To	Bottom Ho $S77^{\circ}10$ $(To B)$	7=102.82276 0'38"E - 860 Bottom 1	30
$N78^{\circ}45$ $AZ = 281$.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	1 / / / / / / / / / / / / / / / / / / /			N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	30.771
$ \begin{array}{c} N78^{\circ}45 \\ AZ = \overline{281}. \end{array} $.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	1 / / / / / / / / / / / / / / / / / / /			N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	3°.71'
$N78^{\circ}45$ $AZ = 281$.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	(N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	30.771
$N78^{\circ}45$ $AZ = 281$.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	() () () () () () () () () ()			N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	30.771
$N78^{\circ}45$ $AZ = \overline{281}$.24278° Az=26 \$86°21'07	6.35194° " <u>W - 461</u> om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	SJ1502-1-20C1CS			N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	3° .71'
4 − −	Az=26: S86°21'07 (To Bott	6.35194° "W - 461 om Hole	1.73'		NBU NBU NBU	NBU NBU NBU	() () () () () () () () () ()			N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	30.771
- 281. 	Az=26: S86°21'07 (To Bott	6.35194° 1"W - 461 om Hole	2.73'		NBU NBU NBU	NBU NBU NBU	() () () () () () () () () ()			N80°5 (To	Bottom Ho S77°10 (To B	7=102.82276 0'38"E - 860 Bottom 1	30.771
Kerr-Mc	Az=26 <u>S86°21'07</u> (To Bott	6.35194° Om Hole Grover, Color	0.73'		NBU NBU NBU	NBU NBU NBU	/ / / / / / / / / / / / / / / / / / /			N80°5 (To	Bottom Ho S77°10 (To B) S6"5.65711° M Hole	S=102.82278 0'38"E - 860 Bottom Hole)	35) 789-1365
Kerr-Mcc 1099 1 WEL	Az=26: S86°21'07 (To Bott Gee Oil & 8th Street - De	6.35194° 7"W - 461 Om Hole R Gas Conver, Color NBU 92	0nshore, Lado 80202		NBU NBU NBU	OBN O' 10'	/ / / / / / / / / / / / / / / / / / /	- 11	I MI	SSO SOUL	9134 L 33 Bottom Ho S77°10 (To B S61,65717° 998.62	S=102.82278 0'38"E - 860 Bottom Hole)	35) 789-1365 G, INC.
Kerr-Mcc 1099 1 WEL	Az=26: S86°21'07 (To Bott Gee Oil & 8th Street - De L PAD - I	6.35194° 6.35194° W - 461 om Hole R Gas Conver, Color NBU 92	Onshore, Lado 80202	_P	NBU NBU NBU	OBN O' 10'	() / / / / / / / / / / / / / / / / / /	E	IMI ENGI 209	SS A SOLITO SS A SOLITO	9134 L 33 Bottom Ho S77°10 (To B S61,65717° 998.62	(4) (4) (4) (4) (6) (6) (6) (6) (6) (6) (6) (6) (6) (6	35) 789-1365 G, INC.
Kerr-Mcc 1099 1 WEL WELLS - N	Az=26: S86°21'07 (To Bott Gee Oil & 8th Street - De L PAD - I L PAD INTENBU 921-20G	6.35194° Om Hole R Gas Conver, Color NBU 92 ERFERENCE 1CS, NBU	Onshore, Lado 80202 21-20G CE PLAT 921-20G4BS,	_P	OBN CONSUL	08N 0' 10'	C	E	IMI ENGI 209 E SURV	SS A SOLITO SS A SOLITO	9134 L 33 Bottom Ho S77°10 (To B S61,65717° 998.62	(4. SURVEYING RNAL, UTAH 840	35) 789-1365 G, INC.
Kerr-Mcc 1099 1 WEL WELLS - N NBU	Az=26: S86°21'07 (To Bott Gee Oil & 8th Street - De L PAD - ! L PAD INTE NBU 921-20G1B 921-20F4CS	6.35194° 6.35194° W - 461 Om Hole Reference 1CS, NBU S, NBU 92 8 NBU 92	Onshore, Lado 80202 21-20G CE PLAT 921-20G4BS, 1-20G, 1-20F1BS	_P	08N 10' 10' 10' 1 CONSUL 2155 North	609 TING, LL Main Street	C	DATI 3-19- DATI	ENGI 209 E SURV -12 E DRAN	SS8 A TO BOTTO BOT	Bottom Ho S77°10 (To B) S61,657/10 998.62 INE G & LAND 1000 WEST - VER SURVEYED B	S=102.82278 0'38"E - 860 Bottom Hole) (4. SURVEYINC RNAL, UTAH 840 BY: A.F.	35) 789-1365 G, INC.
Kerr-Mcc 1099 1 WEL WELLS - N NBU LOCA	Az=26: S86°21'07 (To Bott Gee Oil & 8th Street - De L PAD - I: L PAD INTE NBU 921-20G1B	6.35194° 6.35194° W - 461 Om Hole Renver, Color NBU 92 1CS, NBU 1CS, NBU 92 NBU 92 NBU 92 NBU 92 NBU 92 NBU 92	Onshore, Lado 80202 21-20G CE PLAT 921-20G4BS, 1-20G, 1-20F1BS 95, R21E,	_P	08N 10' 10' 10' 1 CONSUL 2155 North	609 TING, LL Main Stre WY 8280	C ceet 1	DATI 3-19- DATI 3-27-	ENGI 209 E SURV -12 E DRAV -12	SS8 A TO BOTTO BOT	9134 L 339 Bottom Ho (To B) 56/15/65/1/10 998.62 INE G & LAND 500 WEST - VER	S=102.82278 0'38"E - 860 30ttom Hole) (4. SURVEYING SY: A.F. T.J.R.	35) 789-1365 G, INC.









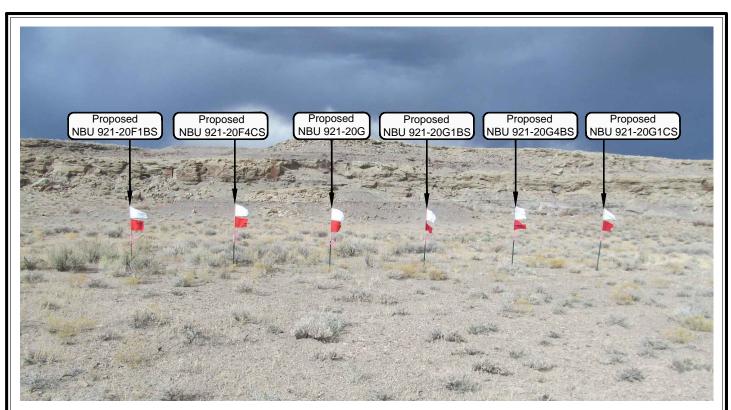


PHOTO VIEW: FROM LOCATION STAKE TO CORNER 1

CAMERA ANGLE: NORTHERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20G

LOCATION PHOTOS NBU 921-20G1CS, NBU 921-20G4BS, NBU 921-20G1BS, NBU 921-20G, NBU 921-20F4CS & NBU 921-20F1BS LOCATED IN SECTION 20, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

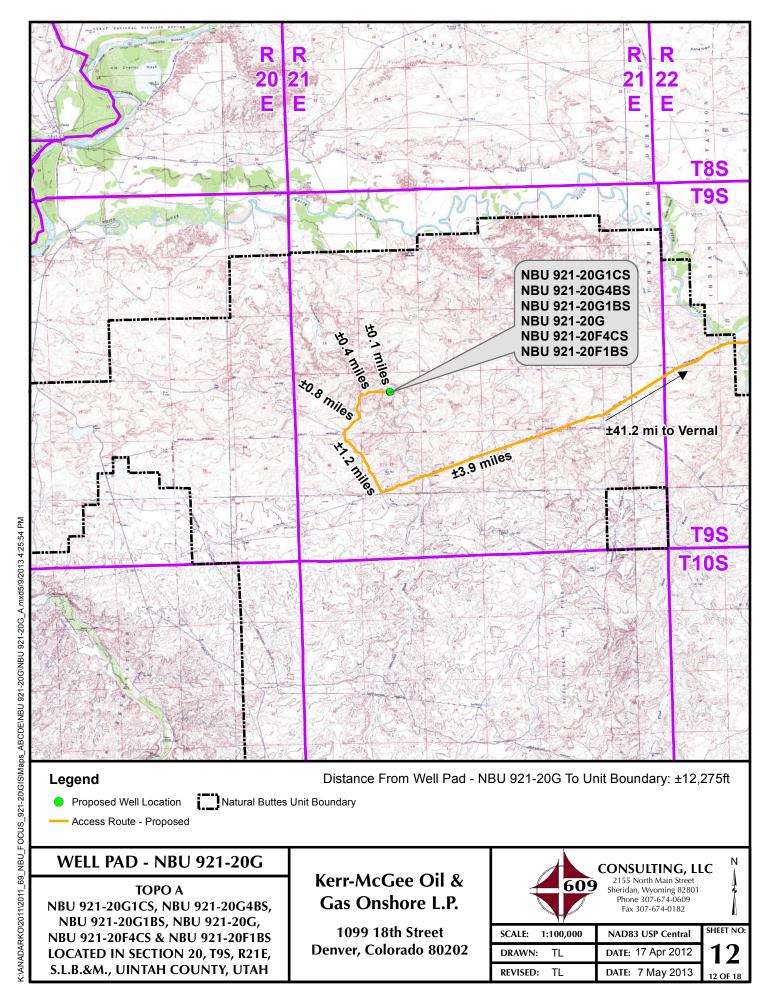
TIMBERLINE

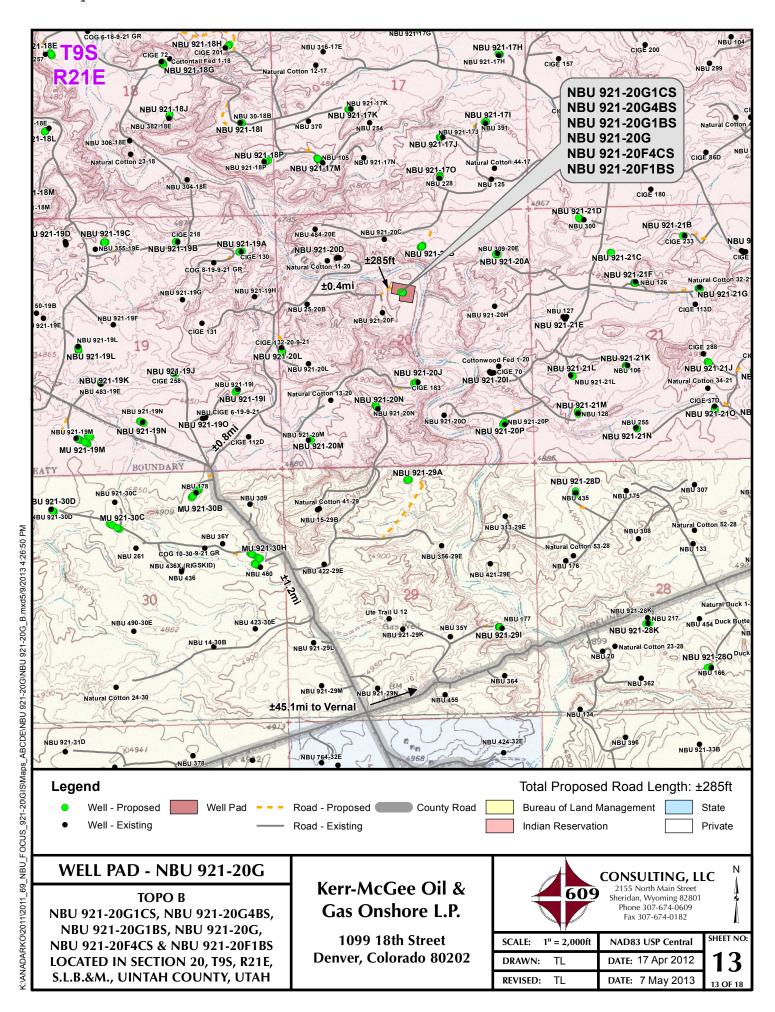
(435) 789-1365

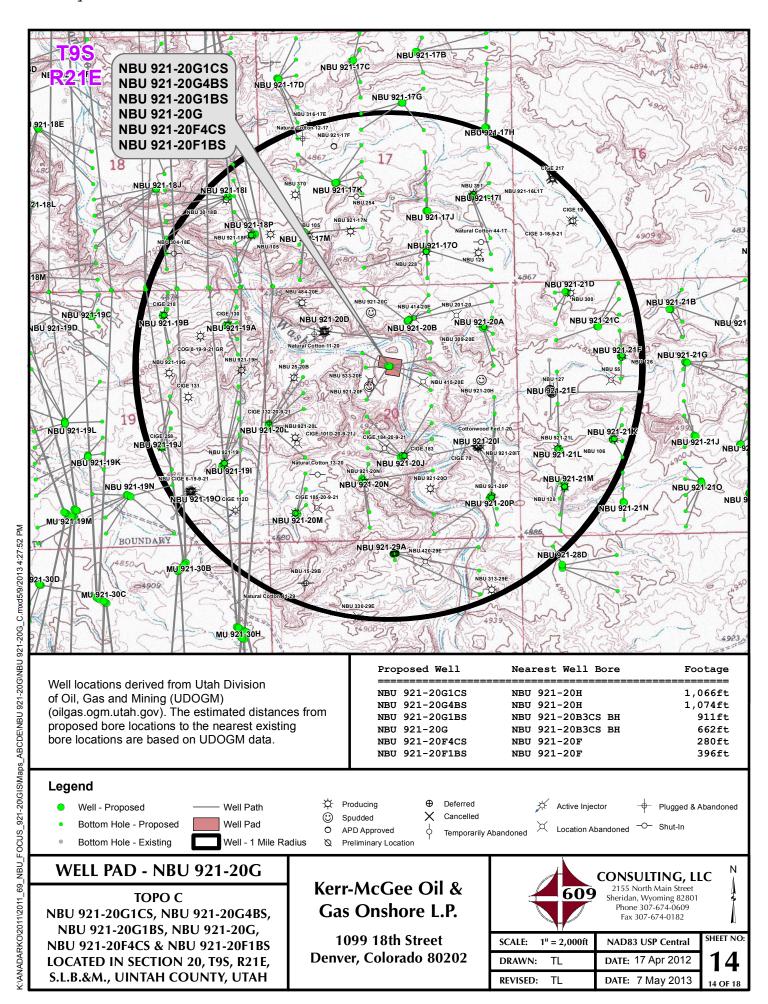
11 OF 18

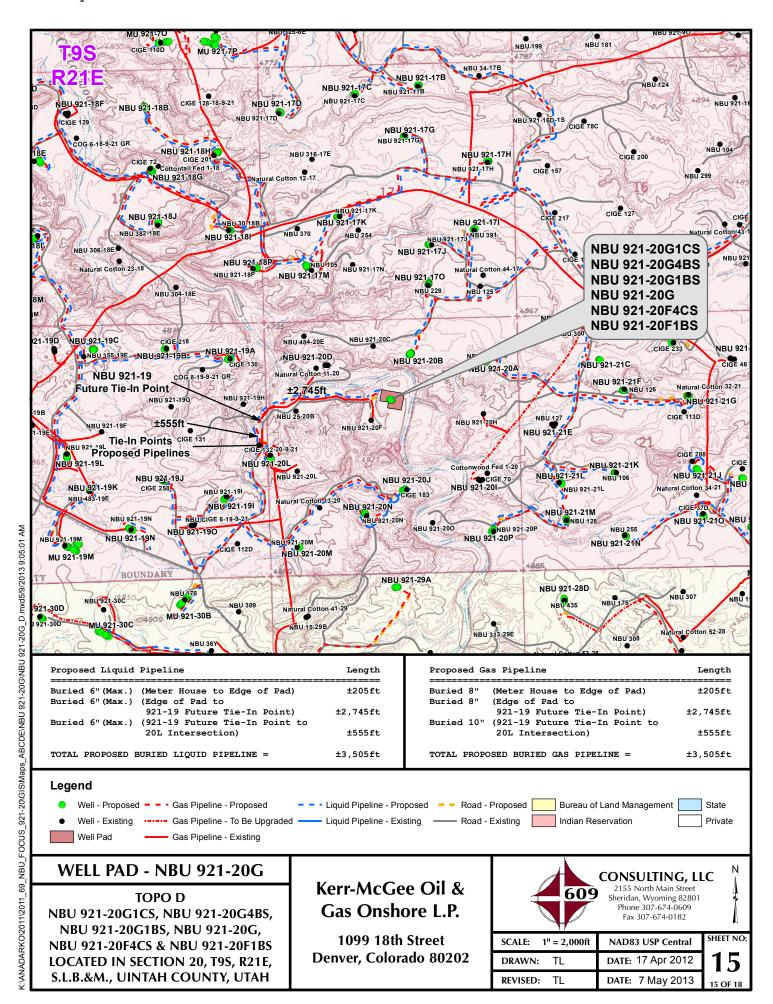
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

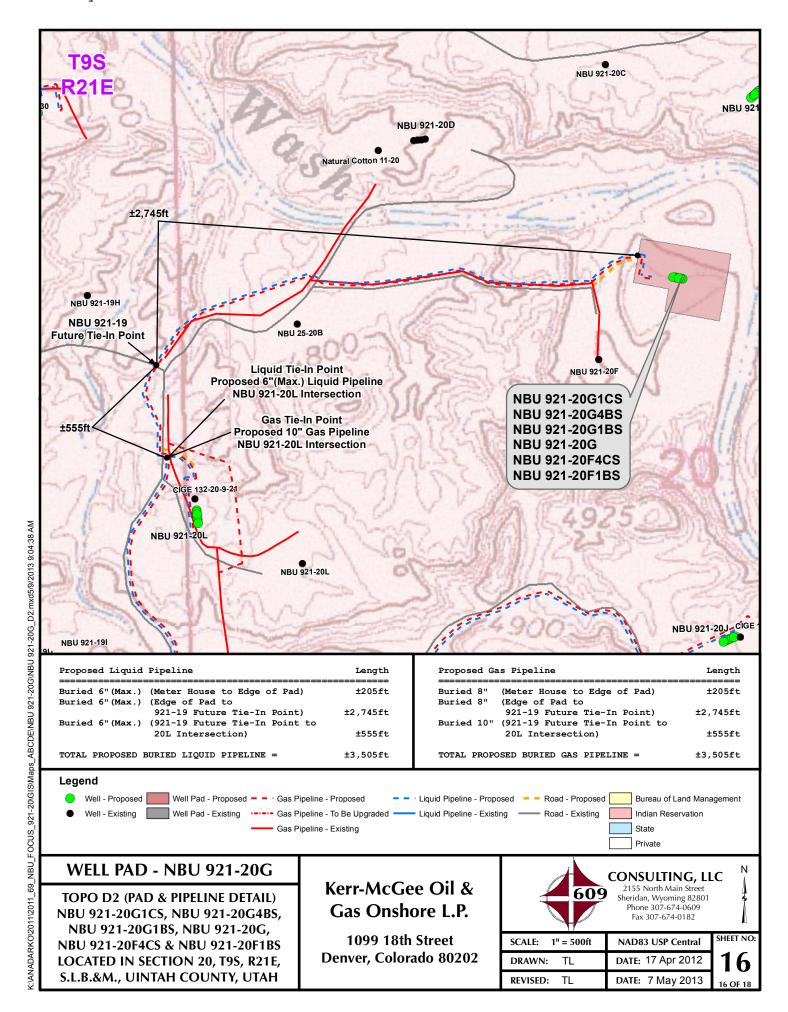
ı			
	DATE PHOTOS TAKEN: 3-19-12	PHOTOS TAKEN BY: A.F.	SHEET NO:
	DATE DRAWN: 3-27-12	DRAWN BY: T.J.R.	11
	Date Last Revised: 5-2-13 J.	.G.C.	11 OF 18

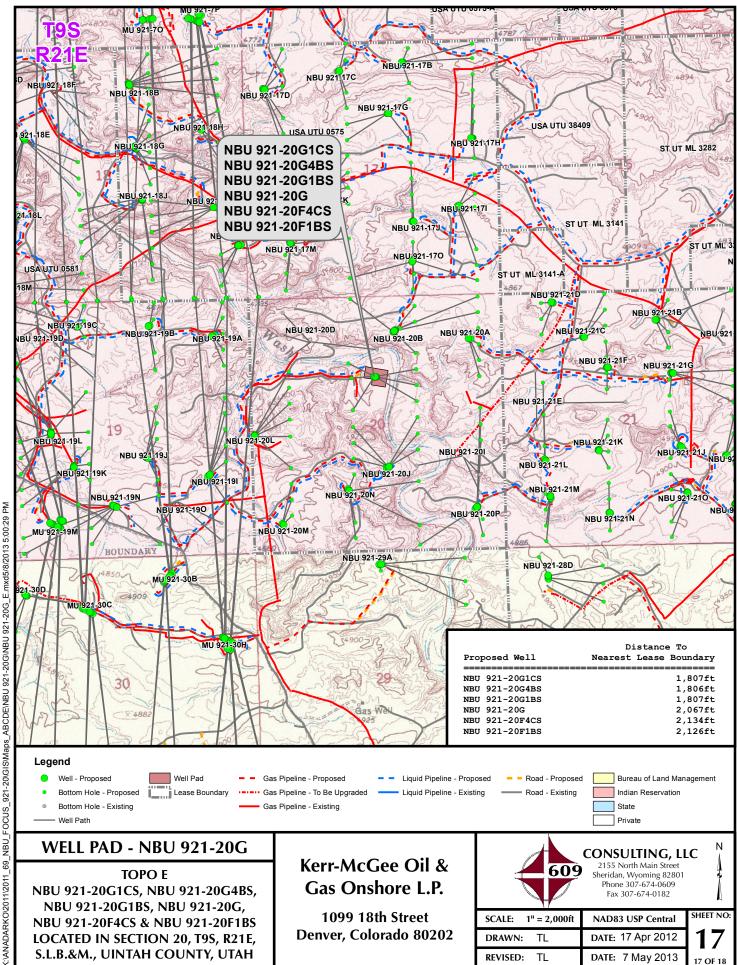












	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20G1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047533460000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 7 3779 720 929-	9. FIELD and POOL or WILDCAT: 65NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1708 FNL 2616 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSI	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meri	dian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 7/31/2013	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
1,01,2010	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
12 DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show	all partinent details including dates	
Spud well 07/31/2 conductor hole to cement with 28 sa	2013 @ 11:00. MIRU Triple o 40', run 14", 36.7# schedu acks ready mix. Anticipated urface casing cement 10/09	A Bucket Rig, drill 20" ule 10 conductor pipe, surface spud date and	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 05, 2013
NAME (PLEASE PRINT) Doreen Green	PHONE NUME 435 781-9758	BER TITLE Regulatory Analyst II	
SIGNATURE N/A		DATE 8/2/2013	

Sundry Number: 43411 API Well Number: 43047533460000

	STATE OF UTAH		FORM 9
I	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
	RY NOTICES AND REPORTS O	- -	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20G1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047533460000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	PHONE NUMBER: 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1708 FNL 2616 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section: 2	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meridi	an: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATI	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION COMPLETED OPERATIONS. Clearly show all Stivity since last report. Well T		CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER: DEPths, volumes, etc. Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 07, 2013
NAME (PLEASE PRINT) Matthew P Wold	PHONE NUMBE 720 929-6993	R TITLE Regulatory Analyst I	
SIGNATURE N/A		DATE 10/4/2013	

	STATE OF UTAH			FORM 9
ī	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
	Y NOTICES AND REPORTS	_		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	sting wells below s. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20G1BS			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047533460000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80217	PHONE NUI 7 3779		9. FIELD and POOL or WILDCAT: 5NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1708 FNL 2616 FWL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section: 2	IIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Merid	lian: S		STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	ΓΕ NATURI	E OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		T	YPE OF ACTION	
	ACIDIZE	ALTER CAS	SING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE T	UBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMING	LE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE	TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND	ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMA	TION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACI	K TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	☐ VENT OR F	LARE	WATER DISPOSAL
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STAT	US EXTENSION	APD EXTENSION
1/2/2014	WILDCAT WELL DETERMINATION	OTHER		OTHER:
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a		details including dates, d	epths, volumes, etc.
	d to 2,985 ft. TD in Quarter 4	-	_	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 03, 2014
NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMB 720 929 6582		ılatory Analyst	
SIGNATURE N/A		DATE	E 2014	

Sundry Number: 49366 API Well Number: 43047533460000

	STATE OF UTAH				FORM 9
ι	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		3	5.LEASE DESIGNATION AND SEI UTU0575	RIAL NUMBER:
SUNDR	Y NOTICES AND REPORTS	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRI UTE	BE NAME:
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAM NATURAL BUTTES	IE:			
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20G1BS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047533460000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 802		NE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT	Γ:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1708 FNL 2616 FWL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section: 2	HP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Me	eridian:	S	STATE: UTAH	
11. CHECH	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA	
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME	
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	NEW CONSTRUCTION	
	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FOR	MATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	TUBING REPAIR		/ENT OR FLARE	WATER DISPOSAL	
✓ DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION	
4/1/2014					
	WILDCAT WELL DETERMINATION		OTHER	OTHER:	
l .	completed operations. Clearly sho			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD April 03, 2014	
NAME (PLEASE PRINT)	PHONE NUM	MBER	TITLE		
Teena Paulo	720 929-6236		Staff Regulatory Specialist		
SIGNATURE N/A			DATE 4/1/2014		

RECEIVED: Apr. 01, 2014

Sundry Number: 52023 API Well Number: 43047533460000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURD DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20G1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047533460000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 7 3779 720 929-	9. FIELD and POOL or WILDCAT: 6 INATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1708 FNL 2616 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meri	idian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
6/5/2014	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:		SITA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION	□ OTHER	OTHER:
The NBU 921-20G	COMPLETED OPERATIONS. Clearly show 61BS was placed on production. Producing from the WAS	tion 06/05/2014 after a	Accepted by the Utah Division of Oil, Gas and Mining FORTE CORP ONLY
NAME (PLEASE PRINT) Doreen Green	PHONE NUMB 435 781-9758	BER TITLE Regulatory Analyst II	
SIGNATURE		DATE 6/6/2014	
N/A		6/6/2014	

Sundry Number: 52564 API Well Number: 43047533460000

Form 3160-4 (August 2007)	WELL (COMPL	BUREAU	TMEN J OF L	T OF AND		TERIOR GEMENT	ORT	AND L	.OG				OM Expi	B No. 1 res: July	PROVED 004-0137 y 31, 2010
1 T (TU0575		T. 1. M
1a. Type of	Completion	Oil Well	☑ Gas ` ew Well	well Wor	L k Ov	-	Other Deepen [ר Pluo	Back	□ D	iff. R	esvr.	6. If	Indian, All	ottee o	r Tribe Name
	1	Othe						1148	, Duck	2 ق	111.10	0511.		nit or CA A ITU63047		ent Name and No.
2. Name of KERR-I	Operator MCGEE OIL	AND GA	AS ONSHŒ	RMEail:il	a.bea		LA BEALE larko.com							ease Name IBU 921-2		
3. Address	P.O. BOX DENVER,		17				3a. Ph Ph: 72		o. (include 9-6000	e area o	code)		9. A	PI Well No		43-047-53346
4. Location	of Well (Rep	port locati	on clearly an	d in acc	ordan	nce with Fe	deral require	ments)*					Field and Pol		Exploratory =S
At surfa	ce SENW	1708FN	L 2616FWL	40.024	1155	N Lat, 10	9.575681 W	Lon					11. S	Sec., T., R.,	M., or	Block and Survey
At top p	rod interval r	eported be	elow SWI	NE 1562	2FNL	1818FEL	_									9S R21E Mer SLB
At total	depth SW	NE 1589I	FNL 1803F	EL										County or P IINTAH	arisn	13. State UT
14. Date Sp 07/31/2				ate T.D. /05/201		hed		D &	Complete A 🔯 5/2014	ed Ready	to Pı	od.	17. I		DF, KI 24 KB	B, RT, GL)*
18. Total D	epth:	MD TVD	10240 10127		19.	Plug Back		MD TVD		169 055		20. Dep	oth Bri	dge Plug Se		MD TVD
21. Type El COMPA	lectric & Oth ACT TRIPLE	er Mechar E COMBO	nical Logs R O QUICKLO	un (Subi OOK-Al-	mit co CON	opy of each	D DEN/C			1	Was I	vell cored OST run? ional Su		⋈ No	☐ Yes	s (Submit analysis) s (Submit analysis) s (Submit analysis)
23. Casing ar	nd Liner Reco	ord (Repo	rt all strings	set in w	ell)											
Hole Size	Size/G	rade	Wt. (#/ft.)	То <u>г</u> (МЕ))	Bottom (MD)	Stage Cer Dept		No. o Type o	f Sks. of Cem		Slurry (BB		Cement '	Гор*	Amount Pulled
20.000		000 STL	36.7		0		10				28					
7.875		625 J55 500 I-80	28.0 11.6		24 29	298 498	_				575 1939				0 1240	
7.875		0 P 110	11.6	4	1989	1021	_				1000				1240	
24 77 1:	D 1															
24. Tubing Size	Depth Set (M	ID) Ps	acker Depth	(MD)	Siz	ze De	pth Set (MD)	Тр	acker De	oth (M	D)	Size	De	pth Set (M	D)	Packer Depth (MD)
2.375		9677	ексі Беріп	(IVID)	512	ZC DC	pui set (MD)	+	acker De)tii (1 v 1	<i>D)</i>	DIZC	1	pui set (ivi	<u> </u>	Tacker Depth (WID)
25. Producii	ng Intervals					2	6. Perforation	n Reco	ord							
	ormation		Тор		Bo	ttom	Perfe	orated	Interval		_	Size	_	No. Holes		Perf. Status
A) B)	WASA MESAVE			8045 8232		8088 10121			8045 T 8232 TC			0.4	-		OPEI OPEI	
C)	MESAVE	INDL		0232		10121			0232 10	7 1012	+	0.4		174	OI LI	N .
D)																
	acture, Treat		nent Squeeze	e, Etc.												
	Depth Interva		121 PUMP 1	0289 BF	SISS	LICKWATE	R, 48 BBLS		nount and				0/50 M	ESH SAND	1	
-	004	3 10 101		0200 22			, 2220	.0,0	02 71012	, ,	,		0,00	2011 07 11 12		
20 P. 1 .:																
Date First	on - Interval	Hours	Test	Oil	To	Gas	Water	Oil Gr	avity	To	Gas		Producti	on Method		
Produced	Date	Tested	Production	BBL	1	MCF	BBL	Corr.			Gravity		Troducti		VC EDO	>N4 \A/EL I
06/05/2014 Choke	06/10/2014 Tbg. Press.	Csg.	24 Hr.	49.0 Oil	\rightarrow	2483.0 Gas	0.0 Water	Gas:O	il	,	Well St	atus		FLUV	VO FR	OM WELL
Size 20/64	Flwg. 1267 SI	Press. 2169.0	Rate	BBL 49		MCF 2483	BBL 0	Ratio		_		GW				
	tion - Interva															
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF	Water BBL	Oil Gr Corr.			Gas Gravity		Producti	on Method		
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF	Water BBL	Gas:O Ratio	il	,	Well St	atus				

(See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #250720 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

28b. Proc	duction - Interv	al C											
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	'	Gas Gravity	у	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well S	Status	<u> </u>		
28c Proc	luction - Interv	nl D											
Date First	Test	Hours	Test	Oil	Gas	Water	Oil Gravity	7	Gas		Production Method		
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API		Gravity	у			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well S	Status			
29. Dispo	osition of Gas(Sold, used	l for fuel, vent	ed, etc.)		•	•						
30. Sumr	nary of Porous	Zones (In	nclude Aquife	rs):						31. Fo	rmation (Log) Ma	rkers	
tests,	all important including dept ecoveries.	zones of p th interval	porosity and co tested, cushic	ontents ther on used, tim	reof: Corec te tool ope	d intervals and en, flowing and	l all drill-ste l shut-in pre	em essures					
	Formation		Тор	Bottom		Description	ons, Conten	ts, etc.			Name		Тор
										G	REEN RIVER		Meas. Depth
The the s 5255	tional remarks first 210 ft. of urface hole w feet to 5256 4989 ft. to 10	the surfa as drilled 5 feet.	ace hole was d with an 11 i DQX csg wa	drilled witl in. bit. A D as run fror	V tool wa n surface	as placed in the to 4989 ft.; L	he well fror _TC csg wa	m		BII MA W	RD'S NEST AHOGANY ASATCH ESAVERDE		1991 2465 5118 8141
repo	rt and final su	rvey.	Allactied is t	ne cinonol	ogical we	ell filotory, per	noration						
	e enclosed atta ectrical/Mecha		rs (1 full cat ro	oa'd)		2. Geologic	Report		2	DST Re	nort	4. Direction	nal Survey
	indry Notice fo	_		-	ı	6. Core Ana	•			Other:	port	4. Direction	iai Sui vey
34. I here	eby certify that	the foreg	Electr	ronic Subm	ission #2	omplete and co 50720 Verified E OIL AND G	d by the BI	LM Well I	nform	ation Sy	e records (see attac estem.	ched instructio	ns):
Name	e(please print)	ILA BEA	\LE				Т	itle <u>STA</u> F	F REC	GULAT	ORY SPECIALIS	ST	
Sions	nture	(Electro	nic Submissi	on)			ח	Date 06/25	/2014				
Sigila		, = ,00010						00/20	, <u>_</u>				
Title 18 U	U.S.C. Section	1001 and	Title 43 U.S.	C. Section	1212, mak	e it a crime for	r any persor	n knowingl	ly and	willfully	to make to any de	epartment or a	gency
of the Un	ited States any	false, fic	titious or frad	ulent staten	nents or re	presentations a	as to any ma	atter within	ı its jui	risdictio	1.		

Sundry Number: 52564 API Well Number: 43047533460000

				U	S ROC	KIES RI	EGION	
				Opera	tion S	Summa	ry Report	
Well: NBU 921-2	20G1BS YELLOW						Spud Date: 10/	2/2013
Project: UTAH-U	JINTAH		Site: NBU	921-200	G PAD			Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING	G		Start Date	e: 10/1/20	013			End Date: 3/8/2014
Active Datum: R Level)	KB @4,824.00usft (a	bove Mean S	ea	UWI: SE	E/NW/0/9	/S/21/E/20	0/0/0/26/PM/N/17	'08/W/0/2616/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/1/2013	22:00 - 0:00	2.00	MIRU	01	С	Р	64	PRE SPUD JOB SAFETY MEETING SKID RIG 20' TO NBU 921-20G1BS RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY. REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD. FINISH PICKING UP BHA.
10/2/2013	0:00 - 1:30	1.50	DRLSUR	02	A	P	64	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 2) .17 REV/GAL PICK UP 12 1/4 DRILL BIT. SPUD @ 10/2/2013 00:00 DRILL 12.25" HOLE 44' TO 210' (166' @ 110 FPH). WEIGHT ON BIT 10-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 700/500 PSI. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 35/35/35 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	1:30 - 3:00	1.50	DRLSUR	06	A	Р	230	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. BREAK 12 1/4" BIT. MAKE UP BAKER 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.
	3:00 - 5:30	2.50	DRLSUR	02	В	Р	230	DRILL 11" SURFACE HOLE FROM 210' TO 520' (310' @ 124 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 900/700 PSI. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 48/47/48 K. DRAG 0 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY .6' HIGH & .4' RIGHT OF THE LINE WITH 50' OF SLIDE @ 16%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End Date: 3/8/2014 Start Date: 10/1/2013 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 5:30 - 6:00 0.50 **DRLSUR** 23 Р 540 CONDUCTED PRE TOUR SAFETY MEETING. 6:00 - 17:30 11.50 540 **DRLSUR** 02 В DRILL 11" SURFACE HOLE FROM 520' TO 1,690' (1,170' @ 102 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1100/950 PSI. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 71/51/61 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.1' HIGH & 6.9' RIGHT OF THE LINE WITH 123' OF SLIDE @ 10.5% CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER RUNNING VOLUME THROUGH 1 CENTRIFUGE DE-WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES 17:30 - 18:00 1710 0.50 **DRLSUR** 23 CONDUCTED PRE TOUR SAFETY MEETING 18:00 - 0:00 6.00 DRLSUR 02 В 1710 DRILL 11" SURFACE HOLE FROM 1,690' TO 2,140' (450' @ 75 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000 PSI. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 78/58/68 K. DRAG 20 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.4' HIGH & 4.5' RIGHT OF THE LINE WITH 56' OF SLIDE @ 12.5%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE-WATERING AND. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES 10/3/2013 0:00 - 5:30 DRLSUR 2160 5.50 02 В DRILL 11" SURFACE HOLE FROM 2,140' TO 2,470' (330' @ 60 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1350/1150 PSI. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 82/70/60 K. DRAG 22 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 6.5' HIGH & 2.4' RIGHT OF THE LINE WITH 22' OF SLIDE @ 7%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE-WATERING AND. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES CONDUCT PRE TOUR SAFETY MEETING. 5:30 - 6:00 0.50 **DRLSUR** 23 Ρ 2490

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End Date: 3/8/2014 Start Date: 10/1/2013 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 6:00 - 15:00 9.00 DRLSUR 02 Ρ 2490 В DRILL 11" SURFACE HOLE FROM 2.470' TO 2.985' (515' @ 57 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1600/1350 PSI. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 90/70/80 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.3' HIGH & .2' RIGHT OF THE LINE WITH 38' OF SLIDE @ 7%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE-WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES 15:00 - 17:00 2.00 **DRLSUR** 05 С 3005 CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 3-400 BBL UPRIGHT'S FULL AND 3-400 BBL UPRIGHTS EMPTY, MUD TANKS FULL. 17:00 - 23:00 6.00 **DRLSUR** 06 3005 PRE JOB SAFETY MEETING, TRIP OUT OF HOLE. LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY. LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN SLOWED DOWN DUE TO POOR WEATHER CONDITIONS (RAIN, SNOW, COLD) 23:00 - 0:00 1.00 **CSGSUR** 3005 12 C BEGIN RUNNING 8 5/8" CASING. RAN 30 OUT OF 67 TOTAL JOINTS. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. FULL REPORT TO FOLLOW NEXT DAY. - 1:00 10/4/2013 0:00 1 00 **CSGSUR** 12 C Р 3005 RUN 67 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 67 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2955' KB. SET TOP OF BAFFLE PLATE @ 2909' 1:00 - 7:00 6.00 **CSGSUR** 21 D Ζ 3005 ***CEMENT BULK TRUCK BROKE DOWN. HAD TO BLOW OUT CEMENT TO NEW TRUCK. WEATHER CONDITIONS WERE BAD AND TRUCKS HAD TO CHAIN UP FOR POOR ROAD CONDITIONS. (4 1/2 HOURS TOTAL - ARRIVED AT 0530) RIG RAN OUT OF FRESH WATER AND DID NOT KNOW UNTIL 0530. WATER WAS TOPPED OFF YESTERDAY. CALLED OUT FOR FRESH WATER AND ARRIVED AT 0830. (3 HOURS TOTAL)***

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End Date: 3/8/2014 Start Date: 10/1/2013 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 7:00 - 10:00 3.00 **CSGSUR** 12 Ρ 3005 Ε PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 1500 PSI. PUMP 50 BBLS OF FRESH WATER CLEARING SHOE. MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT. MIX AND PUMP 300 SX OF PREMIUM LEAD CEMENT WITH 10 LB/SX OF GILSONITE, 2 LB/SX OF GR-3, 3% SALT BWOC, 16% GEL, & 0.25 LB/SX FLOCELE. 173 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX. MIX AND PUMP 175 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBLS OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 181.5 BBLS OF FRESH WATER. GOOD RETURNS THROUGH JOB. FINAL LIFT OF 750 PSI AT 3 BBL/MINUTE. RETURNED 41.5 BBL CEMENT TO SURFACE. TESTED FLOAT AND FLOAT HELD. RELEASE RIG 10/4/2013 AT 1000 TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 100 SX PREMIUM CEMENT WITH 4% CACL2, & .25 LB/SX FLOCELE, 20.4 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT RETURNS TO SURFACE. CEMENT FALLING BACK SLOWLY RIG DOWN PRO PETRO CEMENTERS. CEMENT RETURNS TO SURFACE FELL BACK 50'. WAIT 1 HOURS ON CEMENT, CEMENT DOWN BACKSIDE WITH 100 SX (20.4 BBLS.) SAME CEMENT, 3 BBLS CEMENT RETURNS TO SURFACE. RIG DOWN CEMENTERS. (CEMENT JOB FINISHED @ 10/04/2013 11:00) 2/28/2014 11:00 - 12:00 С Р 3005 1 00 MIRU3 SKID THE RIG AND SET IN THE CATWALK 01 12:00 - 13:00 **PRPSPD** Ρ 3005 NIPPLE UP THE BOP, CHOKE AND FLOW LINE 1.00 14 Α 13:00 - 14:00 1.00 **PRPSPD** 14 Α Р 3005 NIPPLE UP THE MI SWACO EQUIPMENT 14:00 - 17:00 3.00 **PRPSPD** Ρ 3005 15 Α HELD A SAFETY MEETING WITH A-1 TESTER, FILL THE TRUCK WITH WATER, RIGGED UP TESTER TEST ANNULAR TO 2500 PSI FOR 10 MIN AND 250 PSI FOR 5 MINUTES. TEST I-BOP VALVE, FLOOR VALVE, DART VALVE, PIPE AND BLIND RAMS, INSIDE AND OUTSIDE KILL LINE VALVES INSIDE OUTSIDE CHOKE LINE VALVE, HCR VALVE, CHOKE LINE, CHOKE MANIFOLD VALVES TO 5000 PSI FOR 10 MINUTES AND 250 PSI FOR 5 MINUTES. 17:00 - 18:30 **PRPSPD** Р 3005 1.50 15 Α RIGGED UP THE TESTER AND TESTED THE MPD EQUIPMENT TO 1000# FOR 10 MIN

6/18/2014 3:47:09PM 4

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End Date: 3/8/2014 Start Date: 10/1/2013 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD From Operation Start-End Code (usft) (hr) 18:30 - 19:00 0.50 **PRPSPD** Ρ 3005 15 Α TESTING CASING AND CHOKE TO 1500 PSI FOR 30 MINUTES. 19:00 - 21:30 **PRPSPD** Ρ 3005 2.50 06 Α PICK UP AND SCIBE THE NEW MOTOR THEN TRIP IN THE HOLE TO 2700' 21:30 - 22:30 1.00 **PRPSPD** 3005 SLIP AND CUT 104' OF DRILLING LINE 09 Α Р 22:30 - 23:00 Ρ 0.50 **PRPSPD** 06 Α 3005 TRIP IN THE HOLE TAGGED CEMENT @ 2862' 23:00 - 0:00 1.00 DRLPRC 02 F Р 3005 DRILLED THE FLOAT EQUIPMENT AND CEMENT PUMP 80 STK, 330 GPM, 730 PSI MUD MOTOR 69 RPM **ROTARY 40** 0:00 - 5:00 3/1/2014 5.00 **DRLPRC** 02 Ρ 3005 DRILL SLIDE F/ 3005'- 3815' (810' @ 162'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 65 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 544 OFF/ON PSI 1450 / 1850 DIFFERENTIAL 400 TORQUE HIGH/LOW 5000 / 7000 OFF BOTTOM TORQUE 4500 STRING WEIGHT UP/DOWN/ROT 110 / 85 / 95 DRAG 15K **BOS DEWATER AS NEEDED** WT 9.1 VIS 32. ///// DRILLING FLOWZAN //// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 0 BARRELS LOSSES @ 0 BBL/HR NO FLARE BIT POSITION: MD: 3814' Below 6.14' / Left 2.11' Total Footage Drilled From 3005' To 3815' 810' Total Footage Drilled Rotating 762 Percent of Footage Rotated 94.07% Total Footage Drilled Sliding 48 Percent of Footage **Sliding 5.93%** Hours Total Time Rotate Drilling 3.75 Percent of Time Rotated 88.24% Total Time Slide Drilling 0.50 Percent of Time Sliding Connection / Ream / Rig Time / Circulating 0.75 Percent Non-Drilling Time 15.00% Last Survey MD: 3631' Inc 7.9 Azm 79.5 TVD 3519.94'

			IES REGION							
		Operation S	ummary Repor	t						
/ell: NBU 921-20G1BS YELLOW		Spud Date: 10/2/2013								
roject: UTAH-UINTAH	Site: NBI	J 921-20G PAD		Rig Name No: PROPETRO 12/12, SST 8/8						
vent: DRILLING	Start Dat	e: 10/1/2013		End Date: 3/8/2014						
tive Datum: RKB @4,824.00usft (abov vel)	ve Mean Sea	UWI: SE/NW/0/9/5	S/21/E/20/0/0/26/PM/N/	1708/W/0/2616/0/0						
Date Time [Duration Phase (hr)	Code Sub Code	P/U MD From (usft)	Operation						
5:00 - 15:30	10.50 DRLPRC	02 B	P 3815	DRILL SLIDE F/ 3815'- 5019' (1204' @ 114.6'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 65 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 544 OFF/ON PSI 1500 / 2000 DIFFERENTIAL 500 TORQUE HIGH/LOW 7000 / 11000 OFF BOTTOM TORQUE 6000 STRING WEIGHT UP/DOWN/ROT 135 / 105 / 115 DRAG 20K BOS DEWATER AS NEEDED WT 9.2 VIS 32. ///// DRILLING FLOWZAN ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 75 BBL. FLUID FOR HOLE VOLUME 30 BARRELS LOSSES @ 3 BBL/HR NO FLARE BIT POSITION: MD: 4924' North 7.67' / West 5.08' of PBHL Total Footage Drilled Rotating 1152 Percent of Footage Rotated 95.68% Total Footage Drilled Sliding 52 Percent of Footage Sliding 4.32% Hours Total Time Rotate Drilling 6.58 Percent of Time Rotated 73.77% Total Time Slide Drilling 2.33 Percent of Time Sliding 26.12% Connection / Ream / Rig Time / Circulating 1.58 Percent Non-Drilling Time 15.05%						

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5019

RIG SERVICE

15:30 - 16:00

0.50

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6/18/2014 3:47:09PM 6

<u></u>	Number:	32304	API WE					480000				
						KIES RE						
				Opera	ition S	umma	ry Report					
	20G1BS YELLOW			Spud Date: 10/2/2013								
roject: UTAH-L	JINTAH		Site: NBL	921-200	S PAD			Rig Name No: PROPETRO 12/12, SST 8/8				
vent: DRILLIN	G		Start Date	e: 10/1/20	13			End Date: 3/8/2014				
active Datum: R evel)	RKB @4,824.00usft (al	bove Mean S	ea	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0								
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation				
	16:00 - 0:00	8.00	DRLPRV	02	В	P	5019	DRILL SLIDE F/ 5019' - 5782'(763' @ 95.4'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 65 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 544 OFF/ON PSI 1800 / 2200 DIFFERENTIAL 400 TORQUE HIGH/LOW 7000 / 11000 OFF BOTTOM TORQUE 7000 STRING WEIGHT UP/DOWN/ROT 155 / 110 / 130 DRAG 25K BOS DEWATER AS NEEDED WT 9.3 VIS 33. ////// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 45 BBL. FLUID FOR HOLE VOLUME 60 BARRELS LOSSES @ 7 BBL/HR HOLE STARTED SEEOINING MORE @ 5700' NO FLARE BIT POSITION: MD: 5782' North 6.21' / West 6.01' of PBHL Total Footage Drilled Rotating 722 Percent of Footage Rotated 94.63% Total Footage Drilled Sliding 41 Percent of Footage Sliding 5.37% Hours Total Time Rotate Drilling 5.67 Percent of Time Rotated 74.02% Total Time Slide Drilling 2.00 Percent of Time Sliding 26.11% Connection / Ream / Rig Time / Circulating 0.84 Percent Non-Drilling Time 9.88%				

				U	S ROC	KIES RE	GION				
				Opera	tion S	umma	ry Report				
Vell: NBU 921-	20G1BS YELLOW						Spud Date: 10	2/2013			
Project: UTAH-L	JINTAH		Site: NBL	921-200	PAD			Rig Name No: PROPETRO 12/12, SST 8/8			
vent: DRILLIN	G		Start Date	e: 10/1/20)13			End Date: 3/8/2014			
ctive Datum: F	RKB @4,824.00usft (ab	oove Mean S	ea	UWI: SE	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
3/2/2014	0:00 - 5:00	5.00	DRLPRV	02	B	P	5782	DRILL SLIDE F/ 5782' - 6384' (602' @ 120.4'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 65 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 544 OFF/ON PSI 1800 / 2200 DIFFERENTIAL 400 TORQUE HIGH/LOW 7000 / 11000 OFF BOTTOM TORQUE 7000 STRING WEIGHT UP/DOWN/ROT 155 / 110 / 130 DRAG 25K BOS DEWATER AS NEEDED WT 9.2 VIS 32. ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 35 BBL. FLUID FOR HOLE VOLUME 90 BARRELS LOSSES @ 18 BBL/HR HOLE STARTED SEEPING MORE @ 5700' SWACO OFFLINE NO FLARE BIT POSITION: MD: 6384' North 8.45' / West 2.50' of PBHL Total Footage Drilled Rotating 602 Percent of Footage Rotated 100.00% Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00% Hours Total Time Rotate Drilling 4.50 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.50			

				U	S ROC	KIES RE	GION					
				Opera	ition S	umma	ry Report					
/ell: NBU 921-	-20G1BS YELLOW				Spud Date: 10/2/2013							
oject: UTAH-I	UINTAH		Site: NBL	921-200	S PAD			Rig Name No: PROPETRO 12/12, SST 8/8				
vent: DRILLIN	IG		Start Date	e: 10/1/20)13			End Date: 3/8/2014				
ctive Datum: F	RKB @4,824.00usft (al	oove Mean S	ea	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0								
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation				
	5:00 - 17:00	12.00	DRLPRV	02	В	P	6384	DRILL SLIDE F/ 6384' - 7115' (731' @ 60.9'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 65 - 65 MUD MOTOR RPM 105 STROKES PER MINUTE 120 GALLONS PER MINUTE 502 OFF/ON PSI 1800 / 2200 DIFFERENTIAL 400 TORQUE HIGH/LOW 8000 / 113000 OFF BOTTOM TORQUE 8000 STRING WEIGHT UP/DOWN/ROT 165 / 125 / 145 DRAG 20K BOS DEWATER AS NEEDED WT 9.2 VIS 32. ///// DRILLING FLOWZAN ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 45 BBL. FLUID FOR HOLE VOLUME 40 BARRELS LOSSES @ 3.5 BBL/HR SWACO OFFLINE NO FLARE BIT POSITION: MD: 7105' North 20.00' / West 6.11' of PBHL Total Footage Drilled Rotating 706 Percent of Footage Rotated 96.58% Total Footage Drilled Sliding 25 Percent of Footage Sliding 3.42% Hours Total Time Rotate Drilling 9.25 Percent of Time Rotated 81.64% Total Time Slide Drilling 2.08 Percent of Time Sliding 18.36% Connection / Ream / Rig Time / Circulating 1.17				
	17:00 47:20	0.50			_		7445	Percent Non-Drilling Time 9.36%				

17:00 - 17:30

0.50

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7115

RIG SERVICE

				U	S ROC	KIES RI	EGION					
				Opera	ition S	umma	ry Report					
Vell: NBU 921-2	20G1BS YELLOW			Spud Date: 10/2/2013								
roject: UTAH-U	JINTAH		Site: NBL	J 921-200	S PAD			Rig Name No: PROPETRO 12/12, SST 8/8				
vent: DRILLING	G		Start Date	e: 10/1/20)13			End Date: 3/8/2014				
ctive Datum: R	KB @4,824.00usft (ab	ove Mean Sea	а	UWI: SE	E/NW/0/9	/S/21/E/20	1/E/20/0/0/26/PM/N/1708/W/0/2616/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation				
	17:30 - 0:00	6.50	DRLPRV	02	В	P	7115	DRILL SLIDE F/ 7115' - 7495'(380' @ 58.4'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 65 - 65 MUD MOTOR RPM 105 STROKES PER MINUTE 120 GALLONS PER MINUTE 502 OFF/ON PSI 1800 / 2200 DIFFERENTIAL 400 TORQUE HIGH/LOW 9000 / 13000 OFF BOTTOM TORQUE 9000 STRING WEIGHT UP/DOWN/ROT 190 / 135 / 150 DRAG 40K BOS DEWATER AS NEEDED WT 9.2 VIS 32. ////// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE NO FLARE				
								MD: 7495' North 16.44' / West 8.56' of PBHL Total Footage Drilled Rotating 380 Percent of Footage Rotated 100.00% Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00%				
								Hours Total Time Rotate Drilling 6.17 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.33				

RECEIVED: Jun. 25, 2014

Percent Non-Drilling Time 5.08%

				U	S ROC	KIES RI	EGION				
				Opera	tion S	Summa	ary Report				
ell: NBU 921-2	0G1BS YELLOW						Spud Date: 10	/2/2013			
oject: UTAH-U	INTAH		Site: NBI	J 921-200	PAD			Rig Name No: PROPETRO 12/12, SST 8/8			
ent: DRILLING	}		Start Dat	e: 10/1/20)13			End Date: 3/8/2014			
tive Datum: Rh	KB @4,824.00usft (abo	ove Mean Sea	а	UWI: SE	E/NW/0/9	/S/21/E/20	0/0/0/26/PM/N/1708/W/0/2616/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
3/3/2014	0:00 - 5:00	5.00	DRLPRV	02	В	P	7495	DRILL SLIDE F/ 7495'- 7781' (286' @ 57.2'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 55 - 65 MUD MOTOR RPM 105 STROKES PER MINUTE 120 GALLONS PER MINUTE 502 OFF/ON PSI 1800 / 2000 DIFFERENTIAL 200 TORQUE HIGH/LOW 9000 / 13000 OFF BOTTOM TORQUE 9000 STRING WEIGHT UP/DOWN/ROT 190 / 135 / 150 DRAG 40K BOS DEWATER AS NEEDED WT 9.2 VIS 32. ////// DRILLING FLOWZAN ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 20 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 2 BBL/HR SWACO OFFLINE NO FLARE			
								BIT POSITION: MD: 7781' North 13.12' West 9.76' of PBHL Total Footage Drilled From 7495' To 7781' 286' Total Footage Drilled Rotating 286 Percent of Footage Rotated 100.00% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00% Hours Total Time Rotate Drilling 4.67 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.33			

RECEIVED: Jun. 25, 2014

Percent Non-Drilling Time 6.60%

						KIES RI					
				Opera	ition S	umma	ry Report				
	0G1BS YELLOW						Spud Date: 10	/2/2013			
Project: UTAH-U	NTAH		Site: NBL	J 921-200	S PAD			Rig Name No: PROPETRO 12/12, SST 8/8			
vent: DRILLING			Start Date	e: 10/1/20)13			End Date: 3/8/2014			
ctive Datum: R evel)	(B @4,824.00usft (ab	ove Mean S	ea	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
	5:00 - 16:00	11.00	DRLPRV	02	B	P	7781	DRILL SLIDE F/ 7781'- 8257' (476' @ 57.2'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 502 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 11000 / 14000 OFF BOTTOM TORQUE 9000 STRING WEIGHT UP/DOWN/ROT 195 / 135 / 160 DRAG 35K BOS DEWATER AS NEEDED WT 9.4 VIS 32. ///// DRILLING FLOWZAN //// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 30 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 2 BBL/HR SWACO OFFLINE NO FLARE BIT POSITION: 8257' MD North 6.51' West 8.94' of PBHL Total Footage Drilled Rotating 476 Percent of Footage Rotated 100.00% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00% Hours Total Time Rotate Drilling 10.08 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.92			

16:00 - 16:30

0.50

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RIG SERVICE

				U	S ROC	KIES RI	EGION	
				Opera	tion S	Summa	ry Report	
/ell: NBU 921-2	0G1BS YELLOW						Spud Date: 10	/2/2013
roject: UTAH-U	INTAH		Site: NBL	921-200	PAD			Rig Name No: PROPETRO 12/12, SST 8/8
vent: DRILLING	3		Start Date	e: 10/1/20)13			End Date: 3/8/2014
ctive Datum: R	KB @4,824.00usft (ab	oove Mean S	ea	UWI: SE	E/NW/0/9	/S/21/E/20)/0/0/26/PM/N/17	708/W/0/2616/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:30 - 0:00	7.50	DRLPRV	02	B	P	8257	DRILL SLIDE F/ 8257' - 8600' (343' @ 45.7'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 502 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 11000 / 17000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 205 / 145 / 165 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 32. ///// DRILLING FLOWZAN //// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE NO FLARE BIT POSITION: 8600' MD North 5.51' West 8.12' of PBHL Total Footage Drilled Rotating 318 Percent of Footage Rotated 92.71% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 25 Percent of Footage Sliding 7.29% Hours Total Time Rotate Drilling 6.33 Percent of Time Rotated 81.68% Total Time Slide Drilling 1.42 Percent of Time Sliding 18.32% Connection / Ream / Rig Time / Circulating 0.25

							3047533			
						KIES RE				
				Opera	ition S	umma	ry Report			
	20G1BS YELLOW						Spud Date: 10			
roject: UTAH-L	JINTAH		Site: NBL	J 921-200	PAD	1		Rig Name No: PROPETRO 12/12, SST 8/8		
vent: DRILLIN	G		Start Date					End Date: 3/8/2014		
ctive Datum: F evel)	RKB @4,824.00usft (al	bove Mean S	iea	UWI: SE	E/NW/0/9	/S/21/E/20	/0/0/26/PM/N/17	708/W/0/2616/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
3/4/2014	0:00 - 5:00	5.00	DRLPRV	02	B	P	8600	DRILL SLIDE F/ 8600' - 8828' (228' @ 45.6'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 92 STROKES PER MINUTE 105 GALLONS PER MINUTE 440 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 11000 / 17000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 205 / 145 / 165 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 32. ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE NO FLARE #2 PUMP DOWN WITH A SEAT WASHED FOR 7 HOURS SEAT PULLER WAS BROKEN DURING REPAIR JOB BIT POSITION: 8828' MD North 4.69' West 8.59' of PBHL Total Footage Drilled Rotating 228 Percent of Footage Rotated 100.00% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00% Hours Total Time Rotate Drilling 4.83 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.17		

Rotated 96.57% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT		US ROCK	IES REGION		
Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8		Operation Su	mmary Report		
Vent: DRILLING Start Date: 10/1/2013 End Date: 3/8/2014	Vell: NBU 921-20G1BS YELLOW		Spud Date: 10/2	/2013	
Date Time	roject: UTAH-UINTAH	Site: NBU 921-20G PAD	U 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8		
Date Time	vent: DRILLING	Start Date: 10/1/2013	te: 10/1/2013 End Date: 3/8/2014		
Start-End (hr) Code (usft)	• • • • • • • • • • • • • • • • • • • •	UWI: SE/NW/0/9/S			
WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 110 STROKES PER MINUTE 126 GALLONS PER MINUTE 126 GALLONS PER MINUTE 528 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 11000 / 17000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 215 / 145 / 173 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 35. ///// DRILLING FLOWZAN //// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE 3-6 INTERMITTENT CONNECTION FLARE BIT POSITION: 9207 MD South 0.35 West 9.28 of PBHL Total Footage Drilled Rotating 366 Percent of Footage Rotated 96.57% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT	20.0001			Operation	
Total Footage Drilled Sliding 13 Percent of Footage Sliding 3.43%	()			WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 110 STROKES PER MINUTE 126 GALLONS PER MINUTE 528 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 11000 / 17000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 215 / 145 / 173 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 35. ///////////////////////////////////	

9207

RIG SERVICE

14:00 - 15:00

1.00

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				U	IS ROCI	KIES RI	EGION	
				Opera	ation S	umma	ry Report	
/ell: NBU 921-2	20G1BS YELLOW						Spud Date: 10	//2/2013
roject: UTAH-U	INTAH		Site: NBL	J 921-200	G PAD			Rig Name No: PROPETRO 12/12, SST 8/8
vent: DRILLING	 3		Start Date	e: 10/1/20	013			End Date: 3/8/2014
ctive Datum: R	KB @4,824.00usft (at	oove Mean S		1		/S/21/E/20)/0/0/26/PM/N/17	708/W/0/2616/0/0
evel)								
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:00 - 0:00	9.00	DRLPRV	02	A A	P	9207	DRILL SLIDE F/ 9207' - 9570' (363' @ 39.9'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 440 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 16,000 / 20,000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 225 / 145 / 175 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 35. ////// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 10 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE 3-6' INTERMITTENT CONNECTION FLARE BIT POSITION: 9570' MD South 4.33' West 5.55' of PBHL Total Footage Drilled From 9207' To 9570' 363' Total Footage Drilled Rotating 348 Percent of Footage Rotated 95.87% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 15 Percent of Footage Sliding 4.13% Hours Total Time Rotate Drilling 8.00 Percent of Time Rotated 86.49% Total Time Slide Drilling 1.25 Percent of Time Sliding 13.51% Connection / Ream / Rig Time / Circulating 0.25 Percent Non-Drilling Time 2.63%

RECEIVED: Jun. 25, 2014

MD: 9440' Inc 1.1 Azm 133.6 TVD 9326.02'

Sundry	Number:	52564	APT We	-]] N	Jumbe	r: 4	30475334	460000
				U	IS ROC	KIES R	EGION	
				Opera	ation S	umm	ary Report	
Well: NBU 921-2	20G1BS YELLOW						Spud Date: 10/	/2/2013
Project: UTAH-L	JINTAH		Site: NBL	J 921-200	G PAD			Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING	G		Start Date	e: 10/1/20	013			End Date: 3/8/2014
Active Datum: R Level)	KB @4,824.00usft (a	bove Mean S	ea	UWI: SI	E/NW/0/9	/S/21/E/2	0/0/0/26/PM/N/17	708/W/0/2616/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/5/2014	0:00 - 2:30	2.50	DRLPRV	02	В	P	9570	DRILL SLIDE F/ 9570'- 9665' (95 ' @ 38'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 440 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 16,000 / 20,000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 225 / 145 / 175 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 35. ////// DRILLING FLOWZAN ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 6 BBL. FLUID FOR HOLE VOLUME 0 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE 3-8' INTERMITTENT FLARE
	2:30 - 3:00	0.50	DRLPRV	14	В	Р	9665	CHANGE OUT ROTATING HEAD RUBBER

		US	ROCKI	ES RE	SION	
		Operat	ion Su	mmar	y Report	
ell: NBU 921-20G1BS YELLOW					Spud Date: 10/	/2/2013
oject: UTAH-UINTAH	Sit	ite: NBU 921-20G	PAD			Rig Name No: PROPETRO 12/12, SST 8/8
vent: DRILLING	Sta	tart Date: 10/1/201	3			End Date: 3/8/2014
tive Datum: RKB @4,824.00usft (a vel)	bove Mean Sea	UWI: SE/	NW/0/9/S/	/21/E/20/0)/0/26/PM/N/17	708/W/0/2616/0/0
Date Time Start-End	Duration Ph	hase Code	Sub Code	P/U	MD From (usft)	Operation
3:00 - 5:00		RLPRV 02	В	P	9665	DRILL SLIDE F/9665' - 9730' (65 ' @ 21.66'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 114 STROKES PER MINUTE 130 GALLONS PER MINUTE 440 OFF/ON PSI 2000 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 16,000 / 20,000 OFF BOTTOM TORQUE 11000 STRING WEIGHT UP/DOWN/ROT 225 / 145 / 175 DRAG 40K BOS DEWATER AS NEEDED WT 9.5 VIS 35. ///// PRILLING FLOWZAN ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 6 BBL. FLUID FOR HOLE VOLUME 0 BARRELS LOSSES @ 1.5 BBL/HR SWACO OFFLINE 3-8' INTERMITTENT FLARE BIT POSITION: 9730' MD South 7.93' West 1.71' of PBHL Total Footage Drilled Rotating 160 Percent of Footage Rotated 100.00% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00% Hours Total Time Rotate Drilling 3 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.17

Percent

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End Date: 3/8/2014 Start Date: 10/1/2013 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD From Operation Start-End Code (usft) (hr) 5:00 - 22:30 17.50 **DRLPRV** 02 Ρ 9730 В DRILL SLIDE F/ 9730' - 10240(510' @ 29.14'/HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 50 - 65 MUD MOTOR RPM 92 STROKES PER MINUTE 105 GALLONS PER MINUTE 440 OFF/ON PSI 2425 / 2240 DIFFERENTIAL 300 TORQUE HIGH/LOW 12,000 / 13,000 OFF BOTTOM TORQUE 13000 STRING WEIGHT UP/DOWN/ROT 230 / 150 / 180 DRAG 50K BOS DEWATER OFF LINE WT 12.2 VIS 36. ///// DRILLING FLOWZAN //// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 30 BBL. FLUID FOR HOLE VOLUME 0 BARRELS LOSSES @ 1.5 BBL/HR **SWACO OFFLINE** DISPLACED HEAVY MUD @ 10070' 250 BARREL MUD LOST ON DISPLACEMENT 3-8' INTERMITTENT FLARE BIT POSITION: 10240' MD South 18.32' East 5.49' of PBHL Total Footage Drilled Rotating 510 Percent of Footage Rotated 100.00% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0 Percent of Footage Sliding 0.00% Hours Total Time Rotate Drilling 16.92 Percent of Time Rotated 100.00% Total Time Slide Drilling 0.00 Percent of Time Sliding 0.00% Connection / Ream / Rig Time / Circulating 0.58 Percent Non-Drilling Time 3.31% 22:30 - 0:00 DRLPRV CRIC COND FOR SHORT TRIP FOR LOGS 1.50 С Р 10,240 05 3/6/2014 0:00 - 0:30 0.50 **EVALPR** 11 D Ρ 10,240 CIRC FOR LOGS 0:30 - 1:30 PULLED 10 STANDS OUT FLOW CHECK 1.00 **EVALPR** 06 В Ρ 10,240 1:30 - 2:00 0.50 **EVALPR** 06 Ε Р 10,240 FLOW CHECK/ PUMP SLUG/ BLOW DOWN TOP DRIVE 2:00 - 9:30 7.50 **EVALPR** 06 В Р 10,240 TRIP OUT HOLE FOR WEATHERFORD THROGH BIT LOGING (WITH 2 MOTORS 1 MOTOR DOWN TURBO GETING HOT / MOTOR TO BE REPLACED ON 3/7/14 9:30 - 12:30 3.00 **EVALPR** Ρ 10,240 CLEAN THE FLOOR AND RIG UP THE SHUTTLE LOG BHA, THEN INSTALL AND LOAD THE LOGGING 12:30 - 18:00 5.50 **EVALPR** 06 В Ρ 10,240 TRIP IN THE HOLE WITH SHUTTLE LOG BREAKING CIRCULATION AT THE CASING SHOE AND EVERY 2000' FROM THERE TO BOTTOM. LOG TAGGED UP @ 10240'

6/18/2014 3:47:09PM 19

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End Date: 3/8/2014 Start Date: 10/1/2013 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 18:00 - 19:00 1.00 **EVALPR** Ρ 10,240 11 D FILL THE PIPE AND DEPLOY THE SHUTTLE LOGGING 19:00 - 0:00 **EVALPR** 5.00 D Р 10.240 11 TOH @ 30' / MIN. LOGGING OUT 3/7/2014 0:00 - 7:30 7.50 **EVALPR** 11 D Ρ 10,240 TRIP OUT HOLE LOGING 30' MIN LAYDOWN THE LOGGING TOOLS THE CALIPER ARM WAS BENT @ APP 5700' ON THE TRIP OUT OF THE HOLE WAITED ON ORDERS WHILE RIGGING DOWN. ORDERS FROM FRANK FERNANDEZ TO PROCEDE WITH THE CASING RUN - 8:00 0.50 **EVALPR** В Р 10,240 PULLED THE WEAR BUSHING 14 8:00 - 17:30 9.50 **CSGPRO** 12 С Р 10,240 RIGGED UP WEATHERFORD CASING HELD A SAFETY MEETING RAN 232 TOTAL JTS. OF CASING (117 JOINTS OF 4.5"/11.6# / P-110/ LTC + 1PUP + 1 MARKER) + (112 JTS. OF 4.5"/ 11.6#/ I-80/ DQX + 1-DQX CROSS OVER). LANDED @ 10216.15', FLOAT COLLAR @ 10168.80', MESA VERDE MARKER @ 8004.58', CEMENT STAGE TOOL @ 5255.03', CROSS OVER JT. @ 4966.70'. 15 CENTRILIZERS 2 BASKETS - 1 ON EACH SIDE OF THE STAGE 17:30 - 20:00 2.50 **CSGPRO** D Ρ 10,240 05 BREAK CIRCULATION AND CIRCULATE THE CASING ON BOTTOM PUMP: 70SPM / 700 PSI / 293 GPM 20:00 - 22:00 2.00 **CSGPRO** 12 Ε Ρ 10,240 HELD SAFETY MEETING WITH RIG & BJ CEMENTING CREWS, MUD TRUCK DRIVER & WEATHERFORD DV TOOL HAND TEST LINES TO 5600, 1st STAGE PUMP 25 BBLS WATER SPACER, 30% EXCESS, 263 BBLS / 1095 SACKS 14.3 PPG 1.35 YLD, 50/50 POZ +0.002 GPS FP-6L + .70 % BWOC SODIUM METASILICATE + 2% BWOC BENTONITE + .05% BWOC STATIC FREE + 10% BWOW SODIUM CHLORIDE + 0.55% R-3, 5# PER SACK KOL-SEAL, .05% BWOC EC-1, 55.9% FRESH WATER DISPLACE WITH 80 BBLS WATER & 70 BBLS DRILL MUD, BUMP PLUG @ 2647 PSI FINAL LIFT OF 2061, TEST FLOATS, FLOATS HELD WITH 1.5 BBL BACK TO TRUCK, 22:00 - 0:00 2.00 **CSGPRO** 12 Ε 10,240 DISPLACE WITH 80 BBLS WATER & 70 BBLS DRILL MUD, BUMP PLUG @ 2647 PSI FINAL LIFT OF 2061, TEST FLOATS, FLOATS HELD

6/18/2014 3:47:09PM 20

WITH 1.5 BBL BACK TO TRUCK,

CEMENT ESTIMATED @ DV TOOL (CIRCULATE 4 HOURS BETWEEN STAGES)

TO RIG TO CIRC, 50 BBLS

DROP BOMB 30 MINS TO TAG WAITED 30MINS, OPEN DV TOOL 640 PSI, BREAK CIRC & TURN OVER

CEMENT TO PIT 25 BBL. OF WATER TO THE PIT,

Sundry	Number:	52564	APT We	7]] <u>N</u>	Iumbe	r: 4	30475334	460000
				U	S ROC	KIES RI	EGION	
				Opera	tion S	Summa	ary Report	
Well: NBU 921-2	0G1BS YELLOW						Spud Date: 10/	72/2013
Project: UTAH-U	INTAH		Site: NBL	J 921-200	S PAD			Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING	3		Start Date	e: 10/1/20)13			End Date: 3/8/2014
Active Datum: R Level)	KB @4,824.00usft	(above Mean Se	a	UWI: SE	E/NW/0/9	/S/21/E/20	0/0/0/26/PM/N/17	'08/W/0/2616/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/8/2014	0:00 - 2:00	2.00	CSGPRO	05	D	Р	10,240	CIRCULATIING CASING BETWEEN STAGES
	2:00 - 5:00	3.00	CSGPRO	12	E	Р	10,240	2nd STAGE, LEAD 30% EXCESS, 25 BBLS FRESH WATER, LEAD 247 BBLS/ 784 SACKS 13 PPG 1.77 YLD PREMIUM LITE + 0.05 #/SACK OF STATIC FREE + .3 CD-32 + .25 #/SACK CELLO FLAKE + 5 #/SACK KOL-SEAL + .4% BWOC FL52 + 6% BWOC BENTONITE 81.6% FRESH WATER TAIL 12 BBLS 60 SACKS, 15.8 PPG 1.16 YLD "G"+.4%SMS+1%CaCl2 SHUT DOWN DROP CLOSING PLUG, DISPLACE WITH 81.6 BBLS CLAYCARE WATER, BUMP PLUG @ 3370 PSI, 1500 OVER FINAL LIFT OF 1640 PSI, BLEED OFF PSI TEST TOOL, 1 BBL BLED BACK OFF, 45 BBLS CEMENT AND 25 BBL. OF SPACER TO PIT 2nd STAGE @ SURFACE, R/D
	5:00 - 6:00 6:00 - 7:30	1.00	CSGPRO	12	В	P P	10,240 10,240	WASH OUT BOP / SWACO LINE DRAIN AND BLOW DOWN LINES SETTING THE PACK OFF
	1.00	1.00	NDWO	17	Б	,	10,270	HAD TO WASH THE BOWL OUT A FEW TIMES TO GET THE CEMENT OUT TO SET THE PACK OFF
	7:30 - 9:00	1.50	RDMO	14	Α	Р	10,240	NIPPLE DOWN THE BOP, CHOKE AND SWACO EQUIPMENT RIG RELEASED @ 09:00

US ROCKIES REGION

General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-20G1BS YELLOW	Wellbore No.	00
Well Name	NBU 921-20G1BS	Wellbore Name	NBU 921-20G1BS
Report No.	_	Report Date	5/19/2014
Project	UTAH-UINTAH	Site	NBU 921-20G PAD
Rig Name/No.		Event	COMPLETION
Start Date	4/22/2014	End Date	6/5/2014
Spud Date	10/2/2013	Active Datum	RKB @4,824.00usft (above Mean Sea Level)
IWI	SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0		

1.3 General

Contractor	or or	ob Method	Supervisor	
Perforated Assembly	32	onveyed Method		

Summary

1.5

1.4 Initial Conditions

Fluid Type		Fluid Density	Gross Interval	8,045.0 (usft)-10,121.0 (us	5/19/2014 12:00AM
Surface Press		Estimate Res Press	No. of Intervals	48 End Date/Time	5/19/2014 12:00AM
TVD Fluid Top		Fluid Head	Total Shots	192 Net Perforation Interval	64.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	3.00 (shot/ft) Final Surface Pressure	
Balance Cond NEUTRAL	NEUTRAL			Final Press Date	

2 Intervals

RECEIVED: Jun.

2.1 Perforated Interval

25,

2014

Reason Misrun			UCTIO	
_	ght	(m	19.00 PRODUCTIC N	
	Weight	(gram)		
Charge Desc /Charge	Manufacturer			
Phasing	()		120.00	
	Size	(in)	3.125	
Carr Type /Stage No			3.410 EXP/	
Diamete	_	(in)	0.410	
Misfires/	Add. Shot			
Shot	Density	(shot/ft)	3.00	
MD Base	(nstt)		8,047.0	
CCL-T MD Top MD Base	(nst)		8,045.0	
CCL-T	တ	(nstt)		
©CCL@	(nstt)			
Formation/	Reservoir		9/2014 WASATCH/ 00AM	
Date			5/19/2014 12:00AM	

June 19, 2014 at 6:52 am

OpenWells

2.1 Perforated Interval (Continued)

Formation/ CCL@ Reservoir (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason
		8,062.0	8,064.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF N	19.00 PRODUCTIO N
		8,086.0	8,088.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF N	19.00 PRODUCTIO N
		8,232.0	8,234.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,288.0	8,289.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,329.0	8,330.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,359.0	8,360.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,447.0	8,448.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,466.0	8,468.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,540.0	8,542.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,621.0	8,622.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,638.0	8,639.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,652.0	8,653.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,717.0	8,718.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,751.0	8,752.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,767.0	8,768.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,788.0	8,789.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,819.0	8,820.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,866.0	8,868.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		8,944.0	8,946.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO N
		8,990.0	8,992.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 N	19.00 PRODUCTIO N
		9,023.0	9,025.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PF	19.00 PRODUCTIO

2

OpenWells

June 19, 2014 at 6:52 am

Perforated Interval (Continued)

2.

Date	Formation/ Reservoir	(nstt)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
19/2014 2:00AM	MESAVERDE/			9,144.0	9,145.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,156.0	9,157.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,192.0	9,193.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,207.0	9,208.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,296.0	9,298.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,324.0	9,326.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,410.0	9,411.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,477.0	9,478.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,505.0	9,506.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,556.0	9,557.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,579.0	9,580.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,615.0	9,616.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,641.0	9,643.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,693.0	9,694.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,709.0	9,710.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,761.0	9,762.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,783.0	9,784.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,804.0	9,806.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,834.0	9,836.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,892.0	9,893.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	
19/2014 2:00AM	MESAVERDE/			9,911.0	9,912.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00	19.00 PRODUCTIO N	

June 19, 2014 at 6:52 am | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:0

OpenWells

US ROCKIES REGION

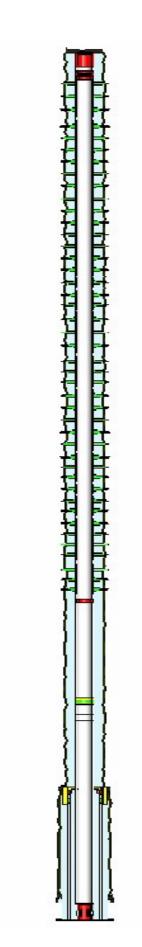
Perforated Interval (Continued)

2.1

Date	Formation/	@TDD	CCL-T	MD Top	CCL@ CCL-T MD Top MD Base Shot	Shot	ires/	Diamete	Diamete Carr Type /Stage No	Carr	Phasing	Carr Phasing Charge Desc / Charge	Charge	Reason	Misrun
	Reservoir	(nstt)	S (nsft)	(nst)	(usft) (usft) Density Add.	Density (shot/ft)	Add. Shot	- <u>E</u>		Size (in)	<u> </u>	Manufacturer	Weight (gram)		
5/19/2014 12:00AM	5/19/2014 MESAVERDE/ 12:00AM			9,942.0	9,942.0 9,943.0 3.00	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PR	19.00 PRODUCTIO N	
5/19/2014 12:00AM	5/19/2014 MESAVERDE/ 12:00AM			10,061.0	10,061.0 10,062.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PR	19.00 PRODUCTIO N	
5/19/2014 12:00AM	5/19/2014 MESAVERDE/ 12:00AM			10,077.0	10,077.0 10,078.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PR	19.00 PRODUCTIO N	
5/19/2014 12:00AM	5/19/2014 MESAVERDE/ 12:00AM			10,096.0	10,097.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PR	19.00 PRODUCTIO N	
5/19/2014 12:00AM	5/19/2014 MESAVERDE/ 12:00AM			10,119.0	10,119.0 10,121.0	3.00		0.410 EXP/	EXP/	3.125	120.00		19.00 PR	19.00 PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



June 19, 2014 at 6:52 am

OpenWells

					U	S ROCK	(IES R	REGION	
					Opera	tion S	umm	ary Report	
Well: NBU 921-2	20G1BS `	YELLOW						Spud Date: 10/	2/2013
Project: UTAH-UINTAH Site: NB					921-200	9 PAD			Rig Name No: MILES-GRAY 1/1
Event: COMPLE	ETION			Start Date	e: 4/22/20)14			End Date: 6/5/2014
Active Datum: R Level)	Active Datum: RKB @4,824.00usft (above Mean Sea			ea	UWI: SE	E/NW/0/9/	S/21/E/2	20/0/0/26/PM/N/17	08/W/0/2616/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/22/2014	6:45	- 7:00	0.25	SURFPR	48		Р		HSM. PINTCH POINTS.
	7:00	- 8:30	1.50	SURFPR	47	A	Р		RU RIG. OPEN WELL 0 PSI. ND WH. NU BOP. RU RIG FLOOR & TBG EQUIP.
		- 11:30	3.00	SURFPR	31	I	Р		PU 37/8 BIT & 37/8 STRING MILL. RIH W/ 163 JTS SPLIT STRING TBG. TAG CMT @ 5146'.
	11:30	- 15:00	3.50	SURFPR	44	A	Р		RU DRL EQUIP. BRK CONV CIRC. DRL OUT 109' OF CMT & DV TOOL @ 5255'. CIRC WELL CLEAN. STD BACK DRL EQUIP. EOT @ 5286'. SWI.
	15:00	- 17:00	2.00	SURFPR	49	Α	Р		MAKE REPAIRS T/ RIG THOTTLE.
4/23/2014	6:45	- 7:00	0.25	SURFPR	48		Р		HSM. PINTCH POINTS.
	7:00	- 9:30	2.50	SURFPR	31	I	Р		SICP = 0 PSI. OPEN WELL. CONT RIH F/ 5296'. TAG CMT @ 10,159' W/ 320 JTS.
	9:30	- 11:00	1.50	SURFPR	44	Α	Р		RU DRL EQUIP. BRK CONV CIRC. DRL OUT 15' CMT T/ PBTD @ 10,1769'. CIRC WELL CLEAN. RD DRL EQUIP.
	11:00	- 17:00	6.00	SURFPR	31	I	Р		POOH, LD 320 JTS SPLIT STRING TBG, 37/8 STRING MILL & 37/8 BIT. RD TBG EQUIP & RIG FLOOR. ND BOP. NU WH. FILL WELL. SWI.
4/30/2014		-							
5/11/2014	9:00	- 10:00	1.00	SUBSPR	52	В	Р		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -80 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.
									PRESSURE TEST 8 5/8 X 4 1/2 TO 544 PSI HELD FOR 5 MIN LOST -471 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 2 BBLS H2O
5/16/2014	8:00	- 9:00	1.00	SUBSPR	37		Р		PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
5/19/2014	6:00	- 6:15	0.25	FRAC	48		Р		HSM,JSA

6/19/2014 6:52:51AM 1

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Project: UTAH-UINTAH Site: NBU 921-20G PAD Rig Name No: MILES-GRAY 1/1 **Event: COMPLETION** End Date: 6/5/2014 Start Date: 4/22/2014 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 6:30 - 17:00 10.50 **FRAC** 36 Ρ Н REFER TO STIMULATION PJR FOR FLUID, SAND AND CHEMICAL VOLUMES, ALL STAGES WERE PERFORATED ACCORDING TO PERF RECORD IN OPEN WELLS, ALL STAGES WERE STIMULATED TO VENDOR POST JOB REPORT. ALL PLUGS ARE HALIBURTON 8K CBPS FRAC STG #1] WHP=1814#, BRK DN PERFS=4310#, @=5.3 BPM, INTIAL ISIP=3080#, FG=.75, FINAL ISIP=3047#, FG=.74, SET PLUG & PERFORATE STG #2 SWI SDFN 5/20/2014 6:15 - 6:30 0.25 **FRAC** 48 HSM,JSA 6:30 - 17:00 10.50 **FRAC** 36 Н FRAC STG #2] WHP=1765#, BRK DN PERFS=4081#, @=5.2 BPM, INTIAL ISIP=2714#, FG=.72, FINAL ISIP=3545#, FG=.80, SET PLUG & PERFORATE STG #3 FRAC STG #3] WHP=2461#, BRK DN PERFS=4166#, @=3.9 BPM, INTIAL ISIP=2819#, FG=.73, FINAL ISIP=2981#, FG=.75, SET PLUG & PERFORATE STG #4 SWI **SDFN** W/O FRAC 6:15 - 6:30 5/21/2014 0.25 **FRAC** 48 Р HSM,JSA 6:30 - 17:00 10.50 **FRAC** 36 Н FRAC STG #4] WHP=2461#, BRK DN PERFS=3430#, @=3.6 BPM, INTIAL ISIP=2906#, FG=.75, FINAL ISIP=3061#, FG=.77, SET PLUG PERFORATE STG #5 FRAC STG #5] WHP=2344#, BRK DN PERFS=4141#, @=5.2 BPM, INTIAL ISIP=3407#, FG=.82, FINAL ISIP=3146#, FG=.79, SET PLUG AND PERFORATE STG #6 FRAC STG #6] WHP=1796#, BRK DN PERFS=2973#, @=4.7 BPM, INTIAL ISIP=2401#, FG=.71, FINAL ISIP=2917#, FG=.77, SET PLUG AND PERFORATE STG #7 SWI SDFN W/O FRAC 6:15 - 6:30 5/22/2014 0.25 **FRAC** Ρ HSM,JSA 48

6/19/2014 6:52:51AM 2

Sundry	Number:	52564 7	APT We	.11 L	Iumbe	r: 4	30475334	160000
				U	S ROCI	KIES R	EGION	
				Opera	tion S	umma	ary Report	
Wall, NDLL 004.0	0004DC VELLOW			Ороло			Spud Date: 10/2	2/2012
	20G1BS YELLOW		O't - NDI	1 004 006	. DAD		Spud Date. 10/2	
Project: UTAH-U			Site: NBU	921-200	PAD	1		Rig Name No: MILES-GRAY 1/1
Event: COMPLE	TION		Start Date					End Date: 6/5/2014
Active Datum: RI Level)	KB @4,824.00usft (a	bove Mean Se	a	UWI: SE	E/NW/0/9/	S/21/E/2	0/0/0/26/PM/N/170	08/W/0/2616/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:30 - 12:00	5.50	FRAC	36	Н	P		FRAC STG #7] WHP=2023#, BRK DN PERFS=3045#, @=3.4 BPM, INTIAL ISIP=2111#, FG=.69, FINAL ISIP=2803#, FG=.77, SET PLUG AND PERFORATE STG #8 FRAC STG #8] WHP=1709#, BRK DN PERFS=2978#, @=4.3 BPM, INTIAL ISIP=2212#, FG=.71, FINAL ISIP=2796#, FG=.78, SET TOP KILL TOTAL BBLS=10,337 TOTAL SAND=217,828
6/4/2014	7:00 - 7:15	0.25	DRLOUT			Р		JSA-SAFETY MEETING
	7:15 - 8:00	0.75	DRLOUT	30	Α	Р		MIRU SERVICE UNIT
	8:00 - 9:00	1.00	DRLOUT	30	F	Р		N/D WH, N/U BOPS AND RIG EQUIP.
	9:00 - 16:30	7.50	DRLOUT	31	I	Р		P/U 3 7/8" BIT AND POBS, RIH W/ 2 3/8" L-80 TBG, TALLY TBG IN, TAG SAND @ 7970', KILL PLUG 7993', R/U SWIVEL, PREPARE TO DRILL OUT IN AN, SHUT WELL IN SDFN,
6/5/2014	7:00 - 7:15	0.25	DRLOUT	48		Р		JSA-SAFETY MEETING
	7:15 - 7:30	0.25	DRLOUT	33	С	Р		PRESSURE TEST BOP AND CSG TO 2500# OK,

6/19/2014 6:52:51AM 3

<u> Sundry Number: 52564 API Well Number: 43047533460000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 921-20G1BS YELLOW Spud Date: 10/2/2013 Site: NBU 921-20G PAD Project: UTAH-UINTAH Rig Name No: MILES-GRAY 1/1 **Event: COMPLETION** End Date: 6/5/2014 Start Date: 4/22/2014 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/1708/W/0/2616/0/0 Active Datum: RKB @4,824.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 7:30 - 7:30 0.00 **DRLOUT** 44 Ρ С ESTB. CIRC DN TBG OUT CSG, DRILL OUT CBPS, (CBP #1) 7995', DRILL OUT HALLIBURTON 8K CBP IN 8 MIN, 50 # DIFF, RIH TAG SAND @ 8240 ', C/O 30 'SAND, FCP = 0 #. (CBP #2) 8270', DRILL OUT HALLIBURTON 8K CBP IN 4 MIN, 400 # DIFF, RIH TAG SAND @ 8506 ', C/O 65 'SAND, FCP = 50 #. (CBP#3) 8571', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 500 # DIFF, RIH TAG SAND @ 8821 ', C/O 25 ' SAND, FCP = 200 #. (CBP#4) 8846', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN,700 # DIFF, RIH TAG SAND @ 9040 ', C/O 15 ' SAND, FCP = 300 #. (CBP#5) 9055', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN, 700 # DIFF, RIH TAG SAND @ 9330 ', C/O 30 ' SAND, FCP = 350 #. (CBP#6) 9360', DRILL OUT HALLIBURTON 8K CBP IN 8 MIN, 500 # DIFF, RIH TAG SAND @ 9640 ', C/O 30 'SAND, FCP = 350 #. (CBP#7) 9670', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN, 400 # DIFF, RIH TAG SAND @ 9836 ', C/O 30 ' SAND, FCP = 500 #. (CBP #8) 9866', DRILL OUT HALLIBURTON 8K CBP IN 8 MIN, 400 # DIFF, RIH TAG SAND @ 10105 ', C/O 50 ' SAND TO 10155 ' PBTD, FCP = 500 #. P/O LAY DN 16 JTS ON TRAILER, LAND TBG IN WELL W/ 304 JTS 2 3/8" L-80 TBG, EOT @ 9677 ', N/D BOP'S, N/U WH, PRESSURE TEST FLOW LINE TO 2500 #, PUMP BIT OFF @ 3500 #, TURN WELL OVER TO FLOW BACK CREW W/ 8751 BBLS WTR LEFT TO RECOVER, FTP = 600 #, SICP = 2400 #, KR 24.00' HANGER .83' 304 JTS 2 3/8" L-80 TBG = 9650.17' XN-NIPPLE 1.875" POBS = 2.20' EOT 9677.20' 314 JTS 2 3/8" L-80 DELV 304 JTS 2 3/8" LANDED 10 JTS 2 3/8" L-80 RETURNED

6/19/2014 6:52:51AM 4

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-20G1BS
Wellbore: Original Hole
Final Surveys
Rig: SST 8

Surface Location: SHL 1708' FNL & 2616' FWL Sec 20-T9S-R21E

Universal Transverse Mercator (US Survey Feet)
NAD 1927 (NADCON CONUS)
Zone 12N (114 W to 108 W)
Elevation: 4805 GL + 24' KB @ 4829.00ft (SST 8)

Northing Easting Latitude Longitude 14538041.93 2039368.65 40.024185 -109.574991

SECTION DETAILS Plan 1 +N/-S 122.75 124.11 Inc 17.07 17.07 **Dleg** 0.00 1.50 Annotation Survey Tie-In/Begin Turn at 2883' MD, 2791' TVD Begin Hold at 2906' MD, 2813' TVD Begin Drop at 3008' MD, 2910' TVD Begin Hold at 4146' MD, 4032' TVD Begin Build at 5046' MD, 4932' TVD 2883.00 2906.14 77.81 78.99 2790.96 642.06 0.00 90.57 653.38 2813.09 648.72 660.17 3007.97 4145.97 690.04 858.22 17 07 78.99 2910.43 129.82 678.06 0.00 0.00 4031.67 843.23 843.23 180.00 0.00 161.95 1.50 0.00 0.00 0.00 4931.67 161.95 0.00 5045.97 0.00 858.22 Begin Hold at 5153' MD, 5038' TVD PBHL 149.04 149.04 5038.34 10226.00 149.04 -180.00 858.33 0.32 858.23 0.00 869.09 10340.38 136.95

WELLBORE TARGET DETAILS (LAT/LONG) Name Longitude 10226.00 136.95 858.23 40.024561 -109.571926 Petroleum Corporation 400 800 1200 400 -400 8000 5000 9000 Surface Survey 10000 Tie-In (2883') ast Pro Guidance 1000 MWD Survey (10185') 3000 900 Projected to TD (10240') NBU 921-20F1BS 8 5/8" Casing Shoe South(-)/North(+) (250 ft/in) South(-)/North(+) (250 ft/in) NBU 921-20G1 000 9000 NBU 921-20G4BS 10000 10000 400 800 1200

West(-)/East(+) (250 ft/in)

Azimuth Corrections

To convert a Magnetic Direction to a True Direction, Add 10.77° East To convert a True Direction to a Grid Direction, Subtract 0.92° To convert a Magnetic Direction to a Grid Direction, Add 9.85°

Created By: Bob Hays Date: 12:23, March 06 2014

Azimuths to True North Magnetic North: 10.77°

Magnetic Field Strength: 52067.6snT Dip Angle: 65.80°

Date: 02/15/2014 Model: IGRF2010

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM) Site: Sec 20-T9S-R21E Well: NBU 921-20G1BS Wellbore: Original Hole **Final Surveys** Rig: SST 8

Surface Location: SHL 1708' FNL & 2616' FWL Sec 20-T9S-R21E

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

Zone 12N (114 W to 108 W)

Elevation: 4805' GL + 24' KB @ 4829.00ft (SST 8)

thing Easting Latittude Longitude

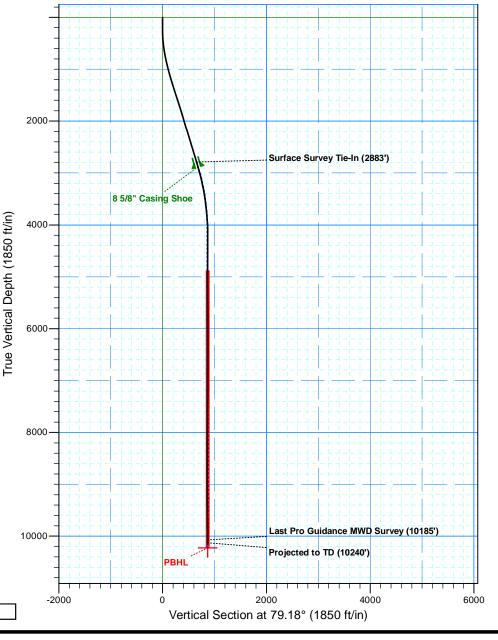
41.93 2039368.65 40.024185 -109.574991

Northing 14538041.93

	SECTION DETAILS Plan 1										
MD 2883.00 2906.14 3007.97 4145.97 5045.97 5152.64 10340.38	Inc 17.07 17.07 17.07 0.00 0.00 0.32 0.32	Azi 77.81 78.99 78.99 0.00 0.00 149.04 149.04	TVD 2790.96 2813.09 2910.43 4031.67 4931.67 5038.34 10226.00	+N/-S 122.75 124.11 129.82 161.95 161.95 161.70 136.95	+E/-W 642.06 648.72 678.06 843.23 843.23 843.39 858.23	Dleg 0.00 1.50 0.00 1.50 0.00 0.30 0.00	TFace 0.00 90.57 0.00 180.00 0.00 149.04 -180.00	VSect 653.38 660.17 690.04 858.22 858.22 858.33 869.09	Annotation Survey Tie-In/Begin Turn at 2883' MD, 2791' TVD Begin Hold at 2906' MD, 2813' TVD Begin Drop at 3008' MD, 2910' TVD Begin Hold at 4146' MD, 4032' TVD Begin Build at 5046' MD, 4932' TVD Begin Hold at 5153' MD, 5038' TVD PBHL		

	WELLBORE TARGET DETAILS (LAT/LONG)										
Name	TVD	+N/-S	+E/-W	Latitude	Longitude						
PBHL	10226.00	136.95	858.23	40.024561	-109.571926						





Created By: Bob Hays Date: 12:24, March 06 2014



Professional Directional LTD

Survey Report

North Reference:



Company: Anadarko Petroleum Corporation

Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-20G1BS
Wellbore: Original Hole

Design:

Local Co-ordinate Reference: TVD Reference: MD Reference: Well NBU 921-20G1BS 4805' GL + 24' KB @ 4829.00ft (SST 8)

4805' GL + 24' KB @ 4829.00ft (SST 8)

True

Survey Calculation Method: Minimum Curvature

Database: EDM 5000.1 Single User Db

Project Uintah Co., UT (UTM)

Final Surveys

Map System: Universal Transverse Mercator (US Survey Fee System Datum:

Mean Sea Level

Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: Zone 12N (114 W to 108 W)

Site Sec 20-T9S-R21E

Northing: 14,536,796.93 usft Site Position: Latitude: 40.020877 Longitude: Easting: 2,036,855.98 usft From: Lat/Long -109.584034 0.00 ft **Slot Radius:** 13.200 in **Grid Convergence:** 0.91° **Position Uncertainty:**

Well NBU 921-20G1BS

Well Position 0.00 ft +N/-S Northing: 14,538,041.93 usft Latitude: 40.024185 +E/-W 0.00 ft Easting: 2,039,368.64 usft Longitude: -109.574991 0.00 ft Wellhead Elevation: 0.00 ft **Ground Level:** 4,805.00 ft **Position Uncertainty**

Wellbore Original Hole

 Magnetics
 Model Name
 Sample Date
 Declination (°)
 Dip Angle (nT)
 Field Strength (nT)

 IGRF2010
 02/15/14
 10.77
 65.80
 52,068

Date 03/06/14 **Survey Program** From То (ft) (ft) Survey (Wellbore) **Tool Name** Description MWD MWD 197.00 2,883.00 Surface Surveys (Original Hole) 3,060.00 10,185.00 Pro Guidance MWD Surveys (Original Hol MWD MWD 10,240.00 10,240.00 Projected to TD (Original Hole) Projection Projection

urvey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197.00	0.43	206.21	197.00	-0.66	-0.33	-0.45	0.22	0.22	0.00
280.00	1.76	74.79	279.99	-0.61	0.77	0.64	2.49	1.60	-158.34
362.00	2.20	75.58	361.94	0.11	3.51	3.46	0.54	0.54	0.96
453.00	4.17	74.95	452.79	1.41	8.39	8.51	2.17	2.16	-0.69
543.00	6.07	80.51	542.43	3.04	16.25	16.53	2.18	2.11	6.18
633.00	7.83	80.68	631.76	4.82	26.99	27.42	1.96	1.96	0.19
723.00	9.85	83.58	720.69	6.67	40.69	41.22	2.30	2.24	3.22
813.00	11.52	81.91	809.13	8.80	57.24	57.87	1.89	1.86	-1.86
903.00	13.19	80.77	897.04	11.71	76.27	77.12	1.88	1.86	-1.27
993.00	14.95	79.98	984.34	15.38	97.84	98.99	1.97	1.96	-0.88
1,083.00	16.36	81.39	1,071.00	19.30	121.81	123.27	1.62	1.57	1.57
1,173.00	17.06	81.12	1,157.20	23.23	147.38	149.13	0.78	0.78	-0.30
1,263.00	17.76	82.62	1,243.07	27.03	174.04	176.02	0.92	0.78	1.67
1,353.00	17.15	79.36	1,328.93	31.25	200.70	202.99	1.28	-0.68	-3.62



Professional Directional LTD

Survey Report



Company: Anadarko Petroleum Corporation

Project: Uintah Co., UT (UTM) Site: Sec 20-T9S-R21E Well: NBU 921-20G1BS Wellbore: Original Hole

Local Co-ordinate Reference: TVD Reference:

MD Reference: North Reference:

Well NBU 921-20G1BS

4805' GL + 24' KB @ 4829.00ft (SST 8)

4805' GL + 24' KB @ 4829.00ft (SST 8)

Survey Calculation Method: Minimum Curvature

5,346.00

5,441.00

0.40

0.50

288.90

256.80

5,232.39

5,327.39

esign: Fi	inal Surveys		Database:			EDM 5000.1 Single User Db				
ırvey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,443.00		79.36	1,414.99	36.11	226.58	229.33	0.30	-0.30	0.00	
1,533.00		78.52	1,501.13	41.11	252.18	255.42	0.28	-0.07	-0.93	
1,623.00		78.90	1,587.23	46.24	277.88	281.62	0.27	0.24	0.42	
1,713.00		79.28	1,673.13	51.32	304.24	308.47	0.71	0.70	0.42	
1,803.00		77.59	1,758.85	56.82	331.11	335.89	0.59	0.16	-1.88	
1,893.00	17.85	76.38	1,844.53	63.03	357.96	363.42	0.41	0.04	-1.34	
1,983.00	17.76	76.99	1,930.22	69.37	384.74	390.92	0.23	-0.10	0.68	
2,073.00		77.25	2,015.94	75.48	411.45	418.31	0.11	-0.07	0.29	
2,163.00		78.88	2,101.77	81.08	437.96	445.39	0.68	-0.40	1.81	
2,253.00	16.62	78.48	2,187.84	86.24	463.73	471.67	0.81	-0.80	-0.44	
2,343.00		78.13	2,273.96	91.54	489.33	497.81	0.60	0.59	-0.39	
2,433.00		78.49	2,360.01	96.88	515.15	524.17	0.28	-0.26	0.40	
2,523.00		77.96	2,446.13	102.22	540.76	550.33	0.18	-0.04	-0.59	
2,613.00		78.31	2,532.21	107.62	566.47	576.60	0.23	0.20	0.39	
2,703.00	16.18	79.10	2,618.45	112.67	591.71	602.34	1.01	-0.98	0.88	
2,793.00		78.92	2,704.81	117.50	616.59	627.68	0.39	0.39	-0.20	
2,883.00		77.81	2,790.96	122.75	642.06	653.69	0.70	0.60	-1.23	
	Survey Tie-In (2									
3,060.00		76.20	2,960.77	133.95	690.71	703.58	0.82	-0.77	-0.91	
3,155.00		77.40	3,052.62	139.50	714.33	727.82	1.92	-1.89	1.26	
3,251.00	12.20	76.00	3,146.14	144.47	735.43	749.48	1.80	-1.77	-1.46	
3,346.00		79.90	3,239.15	148.53	754.34	768.81	1.26	-0.95	4.11	
3,441.00		79.30	3,332.43	151.77	772.00	786.77	0.85	-0.84	-0.63	
3,536.00		80.00	3,426.01	154.71	788.07	803.10	1.27	-1.26	0.74	
3,631.00		79.50	3,519.94	157.24	802.05	817.31	1.48	-1.47	-0.53	
3,727.00	7.00	89.30	3,615.14	158.51	814.39	829.66	1.62	-0.94	10.21	
3,822.00		89.10	3,709.54	158.66	824.98	840.09	1.26	-1.26	-0.21	
3,917.00		97.30	3,804.14	158.23	833.72	848.60	1.32	-1.05	8.63	
4,013.00		97.80	3,899.86	157.27	840.94	855.51	0.94	-0.94	0.52	
4,108.00		98.60	3,994.66	156.39	847.09	861.38	0.32	-0.32	0.84	
4,203.00	1.90	102.40	4,089.54	155.60	851.57	865.64	1.80	-1.79	4.00	
4,298.00		144.00	4,184.52	154.73	853.50	867.37	1.48	-1.16	43.79	
4,393.00		198.20	4,279.51	153.80	853.76	867.45	0.68	-0.32	57.05	
4,488.00		203.80	4,374.51	152.87	853.40	866.92	0.22	0.21	5.89	
4,583.00		184.30	4,469.50	151.60	853.11	866.40	0.35	0.21	-20.53	
4,678.00	1.10	179.90	4,564.48	149.94	853.05	866.04	0.23	0.21	-4.63	
4,774.00		180.80	4,660.46	148.10	853.04	865.68	0.02	0.00	0.94	
4,869.00		174.30	4,755.44	146.03	853.15	865.39	0.35	0.32	-6.84	
4,964.00		157.30	4,850.42	143.88	853.68	865.51	0.43	-0.11	-17.89	
5,060.00		146.00	4,946.40	142.39	854.42	865.96	0.65	-0.63	-11.77	
5,155.00	0.80	149.80	5,041.39	141.34	855.08	866.41	0.12	0.11	4.00	
5,250.00	0.20	280.80	5,136.39	140.80	855.25	866.48	0.99	-0.63	137.89	
E 24C 22	0.40	200.00	E 222 22	1 10 0 1	05177	000.00	0.04	0.04	0.44	

854.77

854.05

866.03

865.33

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0.28

140.94

140.95

RECEIVED: Jun. 25, 2014

0.21

0.11

8.44

-33.79



Professional Directional LTD

Survey Report



Anadarko Petroleum Corporation Company:

Project: Uintah Co., UT (UTM) Site: Sec 20-T9S-R21E Well: NBU 921-20G1BS Original Hole Wellbore:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference: **Survey Calculation Method:** Well NBU 921-20G1BS

4805' GL + 24' KB @ 4829.00ft (SST 8) 4805' GL + 24' KB @ 4829.00ft (SST 8)

Minimum Curvature

Design:	Fin	al Surveys			Databas	e:		EDM 5000.1 S	Single User Db	
Survey										
Measu Dep (ft)	th	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,53	36.00	0.50	305.00	5,422.38	141.09	853.31	864.63	0.43	0.00	50.74
5,63	31.00	0.30	308.80	5,517.38	141.49	852.78	864.18	0.21	-0.21	4.00
5,72	27.00	0.90	353.60	5,613.38	142.39	852.50	864.07	0.75	0.63	46.67
5,82	22.00	0.80	359.10	5,708.36	143.80	852.40	864.24	0.14	-0.11	5.79
5,91	17.00	0.80	9.00	5,803.36	145.12	852.50	864.58	0.15	0.00	10.42
6,01	12.00	0.60	29.50	5,898.35	146.20	852.85	865.13	0.33	-0.21	21.58
6,10	07.00	0.40	62.20	5,993.35	146.79	853.38	865.77	0.36	-0.21	34.42
·	03.00	0.60	95.10	6,089.34	146.90	854.18	866.57	0.36	0.21	34.27
	00.88	1.00	90.30	6,184.33	146.85	855.51	867.86	0.43	0.42	-5.05
6,39	93.00	1.10	42.10	6,279.32	147.53	856.95	869.41	0.91	0.11	-50.74
6,48	38.00	1.20	10.30	6,374.30	149.18	857.74	870.49	0.67	0.11	-33.47
6,58	33.00	1.70	331.90	6,469.27	151.40	857.25	870.43	1.12	0.53	-40.42
6,67	79.00	1.40	327.60	6,565.24	153.65	855.95	869.58	0.33	-0.31	-4.48
6.77	74.00	1.10	317.10	6,660.21	155.30	854.71	868.67	0.40	-0.32	-11.05
	9.00	0.80	301.90	6,755.20	156.32	853.52	867.69	0.41	-0.32	-16.00
	64.00	0.50	280.80	6,850.19	156.75	852.55	866.82	0.40	-0.32	-22.21
	0.00	0.40	252.80	6,946.19	156.72	851.82	866.10	0.25	-0.10	-29.17
7,15	55.00	0.40	231.20	7,041.19	156.42	851.25	865.48	0.16	0.00	-22.74
7,25	50.00	0.40	219.10	7,136.19	155.95	850.78	864.93	0.09	0.00	-12.74
7,34	15.00	0.60	202.10	7,231.18	155.24	850.38	864.41	0.26	0.21	-17.89
7,44	10.00	0.80	201.10	7,326.18	154.16	849.96	863.79	0.21	0.21	-1.05
7,53	36.00	0.70	200.50	7,422.17	152.98	849.51	863.13	0.10	-0.10	-0.63
7,63	31.00	0.70	194.20	7,517.16	151.88	849.17	862.58	0.08	0.00	-6.63
7,72	26.00	0.90	181.10	7,612.15	150.57	849.01	862.18	0.28	0.21	-13.79
7,82	22.00	0.90	181.50	7,708.14	149.06	848.97	861.86	0.01	0.00	0.42
7,91	17.00	0.90	181.90	7,803.13	147.57	848.93	861.54	0.01	0.00	0.42
8,01	12.00	0.90	178.30	7,898.12	146.08	848.93	861.26	0.06	0.00	-3.79
8,10	07.00	0.80	170.90	7,993.11	144.68	849.05	861.12	0.16	-0.11	-7.79
	2.00	0.70	166.80	8,088.10	143.46	849.29	861.12	0.12	-0.11	-4.32
•	98.00	1.00	154.90	8,184.09	142.13	849.78	861.35	0.36	0.31	-12.40
•	93.00	0.60	163.00	8,279.08	140.90	850.28	861.61	0.44	-0.42	8.53
	38.00	0.50	322.30	8,374.08	140.75	850.17	861.48	1.14	-0.11	167.68
·	33.00	0.40	327.10	8,469.07	141.36	849.74	861.17	0.11	-0.11	5.05
8,67	78.00	0.00	280.80	8,564.07	141.64	849.56	861.04	0.42	-0.42	0.00
	73.00	0.30	184.90	8,659.07	141.39	849.54	860.97	0.32	0.32	0.00
8,86	9.00	0.70	178.30	8,755.07	140.55	849.53	860.81	0.42	0.42	-6.88
8,96	64.00	0.60	192.00	8,850.06	139.49	849.45	860.53	0.19	-0.11	14.42
•	59.00	0.60	197.70	8,945.06	138.53	849.19	860.10	0.06	0.00	6.00
•	54.00	0.80	185.50	9,040.05	137.39	848.98	859.67	0.26	0.21	-12.84
•	19.00	0.70	128.30	9,135.04	136.37	849.37	859.87	0.76	-0.11	-60.21
•	14.00	0.90	126.50	9,230.03	135.57	850.42	860.75	0.21	0.21	-1.89
9,44	10.00	1.10	133.60	9,326.02	134.48	851.70	861.80	0.24	0.21	7.40
9,53	35.00	1.30	139.40	9,421.00	133.04	853.06	862.86	0.25	0.21	6.11



Professional Directional LTD

Survey Report



Company: Anadarko Petroleum Corporation

Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-20G1BS
Wellbore: Original Hole
Design: Final Surveys

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference: Well NBU 921-20G1BS

4805' GL + 24' KB @ 4829.00ft (SST 8) 4805' GL + 24' KB @ 4829.00ft (SST 8)

True

Survey Calculation Method: Minimum Curvature

Database: EDM 5000.1 Single User Db

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,630.00	1.40	139.30	9,515.97	131.34	854.52	863.98	0.11	0.11	-0.11
9,725.00	1.20	146.40	9,610.95	129.63	855.82	864.94	0.27	-0.21	7.47
9,821.00	1.30	145.10	9,706.92	127.90	857.00	865.77	0.11	0.10	-1.35
9,916.00	1.60	142.20	9,801.89	125.97	858.43	866.82	0.32	0.32	-3.05
10,011.00	1.70	142.80	9,896.85	123.80	860.10	868.04	0.11	0.11	0.63
10,106.00	1.50	142.20	9,991.82	121.69	861.71	869.23	0.21	-0.21	-0.63
10,185.00	1.60	148.50	10,070.79	119.94	862.92	870.09	0.25	0.13	7.97
Last Pro G	uidance MWD	Survey (1018	35')						
10,240.00	1.60	148.50	10,125.77	118.63	863.72	870.63	0.00	0.00	0.00
Projected t	to TD (10240')								

Design Anno	tations				
	Measured Depth (ft)	Vertical Depth (ft)	Local Coo +N/-S (ft)	rdinates +E/-W (ft)	Comment
	2,883.00 10,185.00 10,240.00	2,790.96 10,070.79 10,125.77	122.75 119.94 118.63	642.06 862.92 863.72	,